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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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LAKE CARRIERS' MEETING.

At a meeting of the Executive Committee of the Lake Carriers' Association, held at the office of Capt. James Corrigan, Cleveland, on Monday afternoon, it was decided to hold the annual meeting of the association in March instead of January. Many of the line managers have been unable to attend the meetings in January and the change was made on that account. The meeting will be held at Detroit, March 22.

A resolution in favor of holding all grain boats in port until April 25 was adopted. Shippers and underwriters will be asked to co-operate with the vesselmen in the scheme. It is thought that all the parties interested will agree on the date named.

After the meeting there was an informal discussion on marine insurance for next year. Capts. John Mitchell, Thomas Wilson and J. C. Gilchrist were appointed a committee to take the matter up and decide on plans for next year. The members of the committee consulted with C. A. MacDonald, the Chicago insurance agent.

President J. S. Dunham, of Chicago, and Secretary C. H. Keep, of Buffalo, attended the meeting.

HEARING ON THE WELLAND CANAL TOLLS.

While the American members of the joint international high commission did not accord Captain Dunham, of Chicago, and Harvey D. Goulder Esq., of Cleveland, president and counsel respectively of the Lake Carriers' Association, and Messrs. Magone and Strong, of Ogdensburg, N. Y., a formal hearing on the subject of the abolition of tolls on grain and coal cargoes passing through the the Welland canal, two members, of the American commission, Senator Fairbanks and Mr. Coolidge, listened to their representations.

The American marine interests regard the imposition of this tax as a discrimination by the Dominion Government, and they wish the joint commission to bring about its abrogation. The two commissioners who heard the statements made by the delegation did not indicate what would be the result of the negotiations on the subject, though it will come up for consideration. There will be no further audiences between the commissioners and the delegates from the Lake Carriers' Association.

THE TRAFFIC OF CANALS.

The great canals of the world and the growth of the business passing through them are discussed in a series of tables just published by the Treasury Bureau of Statistics in its latest issue of the "Summary of Commerce and Finance." The business of the Suez canal, the Kaiser Wilhelm canal, the St. Mary's Fall, the Welland and New York canals, and incidently the commerce passing through the Detroit river are given in detail for a term of years. The following abstract of the figures and general information presented has been taken from a condensed summary issued by the bureau.

The Suez canal shows a net tonnage of 6,576 tons in 1869, its first year, 436,609 in 1870, over a million in 1872, more than two millions in 1875, and a steady increase until 1891, when the figures reached 8,698,777, since which time there has been comparatively little change, the figures for 1897 being slightly below those of 1896, but 33 per cent. in excess of those of 1887, and more than three times those of 1877.

The Kaiser Wilhelm canal, which has been in operation but three years, shows an increase of 50 per cent. in that period in the tonnage passing through it, that of the first year after its opening being 1,505,983, and that for the fiscal year ending March 31, 1898, 2,469,795.

The St. Mary's Falls canal, connecting Lake Superior with the lower lakes, shows a more rapid gain than the Suez. The freight tonnage passing through the St. Mary's Falls canal in 1881 is given at 1,567,741, reaching more than three million tons in 1885, more than five millions in 1887, more than seven millions in 1889, more than nine millions in 1890, more than eleven millions in 1892, more than thirteen millions in 1894, and more than eighteen millions in 1897. Incidentally the freight tonnage passing through the Detroit river is shown to have increased from nine million tons in 1873 to 23,900,520 in 1896, while the increase in the registered tonnage through St. Mary's Falls canal alone in that time is from 1,204,446 to 17,619,933.

The following table presents the statistics of freight tonnage on the great canals of the world from 1880 to 1897:

	St. Mary's Falls Freight Tonnage.	Detroit River Freight Tonnage.	Welland Freight Transported.	New York Canals Freight; Tons to Tidewater.	Suez Net Vessel Tonnage.
1880	*1,734,890	*20,235,249	819,934	4,067,402	3,057,421
1881	1,567,741	*17,572,240	681,506	3,065,839	4,136,779
1882	2,029,521	*17,872,182	790,633	3,068,152	5,074,808
1883	2,267,105	*17,695,174	1,005,156	2,892,176	5,775,861
1884	2,874,557	*18,045,949	837,811	2,900,788	5,871,500
1885	3,256,628	*17,777,828	784,928	2,715,219	6,335,752
1886	4,527,759	*18,968,065	980,135	3,215,177	5,767,655
1887	5,494,649	*18,864,250	777,918	3,158,923	5,903,034
1888	6,411,423	*19,099,060	878,800	2,584,661	6,640,834
1889	7,516,022	19,717,860	1,085,273	2,623,836	6,783,187
1890	9,041,213	21,750,913	1,016,065	3,024,765	6,890,094
1891	8,888,759	23,209,619	975,013	2,286,855	8,698,777
1892	11,214,333	28,553,819	955,554	2,336,519	7,712,028
1893	10,796,572	23,091,899	1,294,823	2,565,845	7,659,068
1894	13,195,860	24,263,868	1,008,221	2,256,895	8,039,175
1895	15,062,580	25,845,679	869,545	1,063,745	8,448,383
1896	16,239,061	27,900,520	1,279,987	2,073,378	8,560,283
1897	18,982,755	.....	.....	1,878,218	7,899,373

NOTE.—The tonnage of the vessels passing through the Kaiser Wilhelm canal from the opening has been as follows:

Year ending March 31, 1896—tons	1,505,983
Year ending March 31, 1897	1,848,458
Year ending March 31, 1898	2,469,795

*Gross tonnage.

The Welland canal tables show that the quantity of freight passed through that canal in 1880 was 819,934 tons, and in 1896 1,279,987, though comparing 1896 with 1872, 1873 and 1874, no increase is found, the figures of 1872 being 1,233,104, and those of 1873, 1,506,484, while the tons passed from United States ports to United States ports through the Welland canal fell from 748,557, in 1874, to 653,213 in 1896.

The New York canal tables show a steady decrease since 1880 in the tons of merchandise carried to tidewater. The number of tons of freight carried to tidewater in 1880 was 4,067,402; in 1890, 3,024,765, and in 1897, 1,878,218, while all other canals mentioned, as above indicated, show large gains in business meantime.

The reduction of freight rates, especially on the Great Lakes and by rail in competition with the lakes and their canals is also shown by a series of tables. These show a material reduction in freight rates between Chicago and New York, whether carried by lake and rail, lake and canals, or by all rail, though the reduc ion where carried by all water route of lake and canals is greater than in cases where a part or all of the transportation is by rail. The average rates per bushel for wheat from Chicago to New York by lake and canal were in 1877, 11.24 cents p r bushel; in 1887, 8.5 cents, and in 1897, 4.25 cents. In the combination of lake and rail freights the rates fell from 15.8 cents per bushel in 1877, to 12 cents in 1887, and 7.37 cents in 1897, while the all rail rates fell from 20.3 cents per bushel in 1877, to 15.74 cents in 1887, and 12.32 cents in 1897.

A LAKE SUPERIOR SALVAGE CASE.

The White Line Towing Company, Duluth, Minn., H. E. Dietzel, Edward England and Charles Green, owners, have libeled the steamer Arthur Orr and cargo, and ask the court to determine the amount of salvage they are entitled to. It is alleged that the tugs Excelsior, Zenith and Superior, barge Noyes and a scow were working on the Tampa and heard that the Arthur Orr was in trouble. The tug Zenith immediately went in search of her and finally found her at Baptism river. She was in a hopeless condition when found, and the outfit mentioned above was brought into use and the cargo and boat brought to Duluth. It is alleged that the boat is valued at $150,000 and the cargo at $185,000. The value of the plant engaged in rescuing the boat and cargo is put at $62,000.

LAWS ON BARRATRY.

According to the Revised Statute, 5364, every person who, on the high seas, or within the United States, wilfully and corruptly conspires, combines and confederates, with any other person, such other person being either within or without the United States, to cast away or otherwise destroy any vessel, with intent to injure any person that may have underwritten or may thereafterward underwrite any policy of insurance thereon, or on goods on board thereof, or with intent to injure any person that has lent or advanced, or may lend or advance, any money on such vessel, on bottomry or respondentia; and every person who, within the United States, builds, or fits out, or aids in building and fitting out, any vessel with intent that the same be cast away and destroyed with the intent hereinbefore mentioned, shall be punished by a fine of not more than ten thousand dollars, and by imprisonment at hard labor not more than ten years.

THE average railway freight rate per ton-mile for the United States, according to "Poor's Manual," was 1.057 cts. in 1885. In 1897 it had fallen to 0.783 ct. Had the freight shippers of the United States paid the same freight rate per ton in 1897 that they did in 1885, the railways would have increased their profits by more than $268,000,000. This enormous reduction in the charge for carrying freight was made possible by the great increase in the average freight train load. Notwithstanding the fact that the railways received on the average only three-fourths the money for carrying a ton a mile in 1897 that they did in 1885, the average earnings per mile run by freight trains were actually greater in 1897.

NEWS AROUND THE LAKES.

CHICAGO.

Special Correspondence to The Marine Record.

The loss of the wooden steamer Aurora on Lake Erie is a hard wind-up for the underwriters. The hull was insured for $90,000 in the Prime-McCurdy syndicate.

There has not been the usual influx of vessel owners and others at this port during the closing days of navigation. Chicago freights very early settled down to bed rock. and there was no incentive offered for late sailings.

Chicago has sent a delegation to appear before the River and Harbor Committee. Other ports requiring an appropriation should do likewise, but it appears that they are mighty slow in getting to the front while the hearings are all expected to be in before the holidays.

The House Committee on Rivers and Harbors have discussed preliminaries of the hearings which are to be given members who desire appropriations for rivers and harbors. The committee desires to have all the hearings completed before the holidays so that the bill may be presented to the House early in January.

The report of the life-saving service in the eleventh district, covering Lake Michigan, for the year ending June 30, 1898, shows the disasters to vessels were 99, total value of vessels and cargoes involved, $1,175,758. On these vessels were 559 persons, and of these but two were lost, the number saved by life-savers who would otherwise have been lost being 88. Only six vessels and cargoes were a total loss.

Ore handlers for the Illinois Steel Co., at South Chicago, were given a pleasant surprise this week in an increase of 5 per cent. on their wages, dating from early last spring. The back pay will range from $20 to $40 a man. More than four hundred men will receive the benefit. This is considered a Christmas present worth having and good words are heard about the Illinois Steel Co. from all longshoremen. It would rebound to good will among men if other extensive and wealthy corporations would go and do likewise.

The Escanaba Towing and Wrecking Co. done excellent work on the Lackawanna liner Wyoming, sunk near Peshtigo by the ice. She has been raised and towed to Menominee by the powerful wrecking tug Monarch. Her cargo of sulphur and general merchandise is badly damaged, and will be nearly a total loss. The sulphur was consigned to the Appleton Paper mills. Six thousand barrels of salt, consigned to Joannes Bros. and Cargill Co., of Green Bay, was jettisoned. The total value of the cargo will not exceed $15,000.

The last charter of the season from Chicago was probably the steamer Robert Mills which loaded wheat for Buffalo at 2½c. She was loaded Saturday night and some remarkably quick work was done. The last of her coal was discharged at midnight and by 7 the next morning she had loaded 73,000 bushels of wheat. This beats old world records all hollow, though on account of the short trade and usually smooth water, cargoes will always be handled more expeditiously on the lakes than at any coast port, either in our own or any other country.

It is said that the unsold lumber stocks on the docks of the Duluth-Superior harbor will not exceed 50,000,000 feet. About 15,000,000 feet of sold lumber will be carried over. Of the unsold lumber it is estimated that 25,000,000 feet will be sold and shipped by rail before the opening of navigation. It is expected that considerable lumber will come to Chicago and the east by rail owing to the favorable all-rail rates. Owing to the small supply of unsold lumber, the shippers, it is said, will not issue their annual books of stocks, but will make typewritten statements for their customers. A year ago the unsold lumber stocks at the head of the lakes amounted to 123,000,000 feet.

The F. & P. M. No. 5, built by F. W. Wheeler & Co. at West Bay City in 1890, is one of the best built, and one of, if not the hardest worked boat on the lakes. All summer she is on the route between Buffalo and Toledo for the Clover Leaf line in the general cargo trade and in the fall she comes west to Lake Michigan for the F. & P. M. winter service. The No. 5 has performed this work ever since she was built, and seems to be in every way capable of doing it for many years to come. Her hull is of the best selected oak, frames diagonally steel strapped with a steel cord running along the head of them. She is sheathed with steel to above her loaded water mark and is equipped with steam steering gear, windlass and capstans, electric light installation, etc.

Prominent men interested in steel state this week that to the sales of 750,000 tons of steel rails reported three weeks ago at least 250,000 tons should be added to represent the full amount. The sales credited to 1898 will aggregate, it is stated, at least 15,000,000 tons, which is the largest amount in the history of the industry. The capacity for the mills in the country is said to be booked for the first six months of 1899, and it is predicted within the next few months the capacity for the remainder of the year will be sold. At the Illinois Steel Co. an order for 75,000 tons of rails for Russian railroads has been turned away for lack of capacity. Home orders are expected to keep the mills occupied. Rails are firm at $18 and an advance of $2 is predicted. Steel, in response to the demand in every direction, has advanced about 75 cents a ton in a little more than 30 days. Pig iron is up an equal amount. The prospects for the coming year in the steel and iron trade are regarded as so phenomenal that it is said an advance in ore is certain as well as delay in making contracts. This report is a close index of the prices that may be expected to rule in the shipbuilding trade on orders placed from now on at lake shipyards.

Nothing but praise is heard of the new steel car ferry and ice crusher built by the Globe Iron Works Co., Cleveland, for the Ann Arbor winter route between Green Bay and Frankfort, or if the ice gets too heavy in the bay, then between Kewaunee and Frankfort. At the solicitation of Ann Arbor officials the eight or ten light-house keepers along both shores of Green Bay, north of Sturgeon Bay, have received instructions from Washington to keep their lights burning all winter. It is believed, therefore, that the Ann Arbor people will endeavor to keep the ferry line open to Menominee all the year. The attempt has been made to maintain an open channel across the bay for four successive winters, but the Ann Arbor company has never succeeded in this. Both wooden ferry boats, Nos. 1 and 2, were damaged one winter by bucking into the ice. From the middle of December until the breaking up of the ice in the spring the company has been obliged to run their ferry boats only to Kewaunee, and the railroad cars have been run around through Green Bay and to Kewaunee, from where they were ferried across the lake to Frankfort, but with the powerful new steel boat No. 3 another persevering effort will be made to keep open communication in the bay all winter.

DETROIT.

Special Correspondence to The Marine Record.

Those interested in bridging Detroit river will have to get together and work mighty hard to down the vessel interests that are opposed to obstructing the river. Why not tunnel?

The White shoals, Gray's reef and Simmons reef light ships are wintered at Sheboygan. Round Island light has also been discontinued and the light ship No. 61 at the foot of Lake Huron.

The steamer Aurora is burned down to a point four feet below her main deck, her engines are a complete wreck and her boilers have tumbled forward into the charred hull. This would indicate that she is an actual total loss.

The steamer Selwyn Eddy which had been trying to force an entrance into Toledo for two days was within nine miles of the harbor when she encountered eight inches of ice and gave up the attempt. She returned to Detroit to winter.

With a few more days of decent weather good hopes are expressed regarding the release of the Tampa, stranded on the north shore of Lake Superior. The Singer line done excellent work on the Arthur Orr and they are now energetically tackling the Tampa.

The wrecking tug Swain, which was sent from Sault Ste. Marie to the stranded steamer Harlem on Isle Royale, was recalled, and this is supposed to indicate that the Harlem has been totally abandoned. She will prove one of the heaviest losses to the underwriters this season.

The Morley built wooden steamer J. J. Hill that went to the coast stranded in the recent big blow and now a contract has been given to the Boston Tow Boat Company to jack her up, place ways under her, and move her a distance of about 2,000 feet or until she becomes waterborne.

The schooner John Breden, of Toledo, was sold at auction here to Ronald Kelly on Tuesday for $280 by United States Marshal Bates. There were $1,500 claims against the property. She would have sold for $500 if time could have been granted for payment or paper taken on part of the purchase price.

Some masters of lake vessels are agitating the placing of more life-saving stations on Lake Superior. At present only the south shore is guarded by them, and even that side of the lake could stand another with benefit to the lake fleet. The spots suggested for new stations are Magdaleine Island and Beaver Bay.

Congressman Southard will introduce the bill which requires masters of vessels on the lakes to report to collectors at intermediate ports the cargo they take on or discharge at such ports. When ex-Senator Brice was in Congress he tried to pass such a measure, but the veseel owners engaged in that kind of trade were able to defeat it.

Capt. Daniel King, aged 87 years, died at the Marine hospital last week. The captain was born in Oswego, N. Y. He sailed on the Great Lakes for over fifty years, and was a master for thirty years. He was well known all around the lakes in his sailing days. Late in life he invested a great deal of money in Colorado mines which failed to prove remunerative. He leaves two sons living in Oswego, N. Y.

A. A. Parker, owner of the schooner San Diego, which, with the Porter, broke away from the steamer towing them, in the Gut of Canso, has received word that she is all right. The schooner Red Wing, also owned by him, is reported safe, as well as the schooner Iron State. For all of these at one time some fears were felt, as they went through a good deal of the recent gales on the north Atlantic coast, and various rumors regarding their safety had been circulated.

The season just closed has not been a successful one in so far as the money earning power of cargo carrying vessels was concerned. The passenger lines, ferry traffic and excursion boats no doubt earned a little above the average where there was not too much competition, but freights ruled too low all season for the majority of tonnage to do much more than pay bills, for, while a large amount of traffic was carried on, the margin was too small to net any profits.

The cost to the underwriters for the Fayette Brown's release after being sunk in Pelee Passage, Lake Erie, will be very large. The services of tugs, of five steam pumps and their crews, and of fifty men who were aboard for several days, will count up immensely. The laborers receive 40 cents an hour continuously during wrecking and salvage operations. Then the dry dock and repair bill will swell the total to several thousands more, as she will certainly have to spend several weeks in the dock.

The Weather Bureau will issue an annual chart containing a summary of the wrecks and casualties of the season, a report upon the frequency of fog during the year, and other matters that will be of interest to lake mariners, about Dec. 15, 1898. Anyone desiring this chart can get it by addressing Willis L. Moore, Chief of the Weather Bureau, Washington D. C., and simply saying: "I desire that the annual chart be sent to address below," adding name and address. Mr. N. B. Conger, of this port, is the lake marine agent for the Bureau.

Capt. Jacob Fisher died at his home last Thursday. A widow and stepson, Glenn A. Aumond, the pianist, survive him. Jacob Fisher was born in Columbia county, Pa., 54 years ago. In 1866 he came to Michigan. For a time he followed the trade of carpenter, but afterwards he purchased the Steamer Brown and ran her between Pentwater and Ludington. The captain sold his vessel property about eight years ago and came to Detroit and engaged in the saloon business. He was a member of the Elks, the Century Club and Ludington Lodge, F. & A. M. The remains were sent to Pentwater, and the funeral held under the direction of the Masonic fraternity.

Toledo very pertinently claims that a great injustice is done to that port in the statistics of trade published by the Treasury Department on account of lack of these reports by masters at intermediate ports, all the goods shipped into or out of them are credited to the cities at the end of the vessels' voyage. The doubling up part of it, or rather the recording of the same cargo two or three times according to the number of ports of call is a corker for statisticians to solve as we get quite enough of that lack of system already. As for instance, clearing from Lakes Michigan, Erie or Ontario and passing Detroit, or a portion of the same traffic passing the St. Mary's Falls canal, so goes on the volume of duplication.

If Chief Kendall, of the fire department, has his way, Detroit will soon have another fireboat, more powerful than the Detroiter. Property owners along the docks on the eastern side of the city want it, and the commissioners will be asked to include the price in their annual estimates. "Although the Detroiter has always done excellent work," said the chief, "she is not strong enough for a city as large as Detroit. There should be a boat on the eastern side powerful enough to force water at a greater pressure through the pipe lines laid there. The Randolph street pipe is 4,800 feet long, and the Detroiter is hardly able to pump water through it with satisfactory force. Cleveland has two fireboats, Milwaukee has two and Chicago has four. Detroit should have two." The Detroiter will be kept in service during the winter.

"Tied up for the season of '98" is the title of a nicely colored card sent out by Mr. Schantz, G. P. A. for the D. & C. Navigation Co., notifying the patrons of the line that the service has closed until next spring. There's no telling at what angle these genial passenger agents shoot off. They're fit to tackle anything, in any way, at any time. In this instance Mr. Schantz gathers the five boats of the fleet up in the air, like Sambo did with his flat boat in the squall, he then takes a round turn with a piece of manila and secures the ends, strop-like, with a reef knot, no! but a pronounced "granny," or rather thief knot, or rather no knot at all. What a nautical abomination! He might have asked one of his "Jimmy Ducks" on the boat how the ends of a reef knot show. On the other side of the card he piles the fleet on a wharf, end for end, keel up and every old way, like a bundle of sticks, until they look like a quintette of castaways, something, p'raps like the late Spanish fleet in Manila Bay after Dewey got through with them. Outside of the colored picture, if Mr. Schantz was trying to make a burlesque of the line, I think he has eminently succeeded in his last picture gallery.

The dining saloon of the steamer City of Detroit was the scene, Saturday evening, of the annual dinner tendered by General-Manager Carter to the employes of the Detroit & Cleveland Navigation Co. Steward Thomas' menu was perfect. Manager Carter took occasion to commend the gathered employes for the faithful manner in which they had performed their several duties during the season of navigation just closed. He said in part: "It is with great pleasure that I again welcome you around this table, with unbroken ranks, to fitly celebrate the close of another successful season's business. To those of you who navigate our steamers, let me congratulate you upon the safe operation of our ships on their various routes for more than 165,000 miles, without accident to property or passengers. To the heads of departments let me thank you for the able manner in which you have administered your respective trusts, and for the kind co-operation and assistance rendered me in our great work. Let me say to you feelingly that all of the glory for our success does not belong to me, but that every employe, from the highest to the lowest, has contributed to and are entitled to their respective measure of credit as a whole." General-Passenger Agent Schantz introduced three dusky couples who showed the employees the "real thing" in the cake walk.

ONE of the most disastrous fires on record broke out on Wednesday last at the dock of the Lehigh Coal & Coke Company, at West Superior.

CLEVELAND.

Special Correspondence to The Marine Record.

The stranded schooner Owen is still ashore near Ashtabula.

Capt. Gaines and crew, of the burned steamer Aurora, arrived here on Tuesday.

The Corona will be dry docked here and surveyed after striking on a bar off Ashtabula.

It is reported that Duluth wheat will be held for winter storage and spring delivery at a 3½-cent rate.

Fourteen arrivals on Tuesday, chiefly of the largest class of steamers, marked about the wind-up of the season.

Before March 1, the 250,000 tons of iron ore now on the docks at Conneaut has to be shipped to the furnaces. This will give a railroad traffic of about 3,000 tons daily.

Harvey D. Goulder, Esq., counsel for the Lake Carriers' Association, presented a brief this week before the Senate committee on commerce against the Detroit river bridge bill.

Capt. J. S. Dunham, president, and C. H. Keep, Esq., secretary, of the Lake Carriers' Association, attended a meeting of the association held at the office of Capt. James Corrigan this week.

The local life-saving crew were paid off for the season to-day (Thursday). Vessels are still arriving b t the wages fund of the life-saving service has become depleted, or rather it is only expected to hold out until this date.

It would not surprise anyone if Mr. John Corrigan, after losing the steamer Aurora, would soon place an order for a large, steel-built craft. The Aurora was one of the heaviest built, staunchest and most powerful wooden steamers on the lakes.

The Brown Hoisting & Conveying Machine Company are to fit out the Bethlehem Iron Company with a 50,000 ton cold storing plant and a 100,000 ton ore storing plant, also a 200 foot gantry crane for the Pennsylvania Steel Company. The foreign orders received by the Brown Hoisting Company are also very extensive.

Colonel, now General Ludlow, well known on the lakes through his efforts some years ago to properly buoy and light the St. Mary's river, has been appointed governor of Havana subordinate to General Lee, who is governor of the province, and who in turn is held answerable to Maj. Gen. Brooke, governor of the six provinces of the Island of Cuba.

At a meeting of the executive committee of the Lake Carriers' Association held on Monday it was the sense of the meeting that the opening of navigation next spring should not be earlier than April 25, and underwriters will be asked to co-operate with the vessel owners to this extent and that policies on grain cargoes should not take effect until that date.

There are at present 38 vessels in winter quarters at Lorain, as follows: Nine screw steamers, four side-wheel steamers, twenty tow-barges and five schooners. A few more are expected to arrive. It is said that much of the credit for this large fleet seeking winter moorings at Lorain is due to the energetic action of Mr. James C. Wallace, manager of the Cleveland Ship Building Company.

Vesselmen are more hopeful of profitable business next year than they have been at any close of navigation for three years past. They base their hopes upon the enormous sales of steel rails to railroads already reported, and the certainty that the consumption of iron ore will reach the highest figure in 1899 ever known. For the first time in several years the new tonnage will not keep up with the expected increase of business.

The Detroit river ferry boats made a passage for a fleet of about sixty vessels ice jammed for several days in the vicinity of Pigeon Bay and between the mouth of Detroit river and the (Dummy) Point Pelee. Mr. Colby, manager of the Pickands-Mather fleet, has been indefatigable in his efforts to release the imprisoned vessels and the thanks of a large body of owners, as well as the underwriters, are due for this successful work in this direction. Mr. Colby is entitled to an honorary and substantial recognition and appreciation of his services in this important work.

Mr. James Corrigan in a recent interview at Duluth is quoted as saying as follows: "The activity in the iron business and the acquiring of so many properties by the Oliver-Carnegie combination has given a more permanent value to iron properties. I look to see an advance of from 10 to 20 cents a ton in the prices of iron ore next season. The advance will represent increased wages and cost of supplies. The iron business is on the boom and I shall not be surprised to see 3,000,000 tons more of iron ore shipped next season than has been sent forward this season. This is a pretty stiff increase for a single season but I have no doubt that we shall witness it. Pig iron went up a dollar a ton the other day and plate is liable to advance. All this has had a good effect on iron properties. A few years ago iron properties were a drug on the market, but they are no longer so."

The Leader here on Wednesday starts off with an editorial as follows: "December navigation on the lakes, like December street paving." Now, what in the name of "the man of the mast" has street paving to do with navigation. P'raps the editor was trying to emulate the plow boy when he hollered to the canaller, "Say mate, my trade and yours are alike; you plow the seas and I plows the land." I fail to see the connection between navigation and street paving, though. Not contented with such a unique simile he winds up by warning vessels not to start out too early in the spring as "that will be comfortable for the crews as well as the insurance companies." Well, I don't think crews usually go on board vessels for comfort. Jack is quoted as saying that people who go to sea for pleasure ought to go to Hades for pastime. In any case, if lake vessels are not in service, early or late, no crews are required, consequently no work, much less comfort. Then again, insurance companies would lose the extra premiums demanded on early risks, so that all around we would be asking what we are here for anyway. Vesselmen can't be loaded down to the scuppers with any kind of twaddle like the foregoing.

BUFFALO.

Special Correspondence to The Marine Record.

The Orinoco and consort passed the "Soo" bound down, locking through on Wednesday afternoon. The Maruba and consort followed at 8 p. m.

There is now eight million bushels of grain afloat in the harbor and vessels are coming in steadily from the ice jam at the mouth of Detroit river. There is a good deal of grain shipped east by rail but as there is a lack of cars it don't lift the blockade any.

A lien was placed on the cargo of the steamer Germanic for demurrage on Tuesday. The boat lies at the Coatsworth elevator. The only boat to leave port on Tuesday was the City of Genoa for Cleveland to lay up. None arrived. The ice is forming rapidly in the harbor and tugs have to break a passage at Tifft farm but the steadily increasing cold is making the ice solid.

The wreck of the steamer N. K. Fairbank has been purchased by Capt. Strong, of the barge Cahoon. He will have her rebuilt at Tonawanda this winter. The Fairbank is 205 feet long and 37 feet beam and can carry 50,000 bushels of grain. It will cost about $6,000 to put her in good condition. She will be put in the bulk cargo trade until the St. Lawrence canals is completed, when she will probably be sent to the coast.

The weather here, coupled with the grain blockade at the elevators, knocked the spots out of the shipping business during the week. The Grecian cleared for Georgian Bay on Monday, but no one expects that she will reach her destination this fall. The ice commenced to make here early this week, and while there was then only a fringe around the shore it is spreading every twelve hours and hard freezing weather prevails.

PORT HURON.

Special Correspondence to The Marine Record.

Harry Randall died at his home at this port, Thursday night last, after an illness of about three weeks with spinal trouble. Mr. Randall was only 28 years old, and as manager for the last five years of Miller & Son's fueling dock was well liked by vesselmen who stopped to fuel up here. When he was first taken sick it was not supposed that the illness would be serious, but the young man had a premonition of approaching death, and told his wife and friends that he would die on the 8th of this month, and he gave directions for the disposition of his personal effects. His death occurred on the last hour of Thursday, on the day he had anticipated. Mr. Randall was married about a year ago to Miss Lillian Crawford, and has since lived with his wife at a pleasant home, which was constructed especially for them by Miller & Son, in whose employ Mr. Randall had been for a number of years. He was a young man held in the highest esteem by a long list of business men and others with whom he had associated. He was a member of some of the local beneficial orders. The Woodmen of the World and the Maccabees were among the number. The funeral services were held on Sunday afternoon, under the auspices of Cedarwood Camp and Diamond Tent, and the burial took place in Lakeside cemetery.

FLOTSAM JETSAM AND LAGAN.

A Saturday dispatch from the captain of the wrecking tug Favorite stated that the St. Lawrence, ashore at Frankfort, was breaking up and had been abandoned.

Work will begin soon on a new foundry 60 x 250 feet, at the American Steel Barge Co.'s yards at West Superior. The company will build engines and do general jobbing foundry work.

James Paul and Peter Eli, of Ottawa, Ont., will add another steamer to their fleet plying between Montreal and Oswego, She will be 110 feet over all, and have an average speed of ten miles an hour.

According to the estimates of shipping trade for the year 1898, New York is now the leading seaport of the world. The value of New York's foreign trade for the year is estimated at $1,300,000,000, while that of London, Eng., is $1,202,207,847.

Every person, not being an owner, who on the high seas, willfully and corruptly casts away or otherwise destroys any vessel to which he belongs, being the property of any citizen, shall be punished with imprisonment for life, or for any term of years, Rev. Stat. 5366.

The fourth annual meeting of the Association of the Naval Militia of the United States was held at Philadelphia, Pa., on the 2d, on board the old receiving ship St. Louis. The day's session was given to a general discussion of the advisability of forming a naval reserve of a national character.

Colgate Hoyt, president of the American Steel Barge Company, says the company will commence the construction of the new dry dock just as soon as the dock line commission establishes an absolute dock line. Mr. Hoyt says the new dock will be the best and largest dry dock in the country.

Judge Lochren, at Winona, Wis., dismissed the action of the Howard Transportation Company vs. the Rochester, Thousand Islands & Ogdensburg Navigation Company. The suit was for $13,000 damages for the alleged failure of the steamer Bon Voyage to run up to guaranteed speed in the Great Lakes.

Acting Secretary Spaulding has informed the collector at Marquette that the fine of $500 imposed on S. Marx, owner of the steamer Night Hawk, for navigating the vessel without inspection, has been reduced to $50. Marx claimed that he was not aware of the requirement, and as there was no evident intention to violate the law the fine was mitigated.

The Rev. Statute 4609 states as follows: If any person shall demand or receive, either directly or indirectly, from any seaman or other person seeking employment as a seaman, or from any person on his behalf, any remuneration whatever for providing him with employment, he shall, for every such offense, be liable to a penalty of not more than one hundred dollars.

The American Ship Windlass Co., of Providence, R. I., has received an order from the Agent General of Natal for one of its large "Providence" capstans to go on a dock at Natal, South Africa, for the public works department. The company has also recently received an order for other "Providence" capstans to go on the cassion of a dry dock on the east coast of England.

"A rumor comes from Belfast, Ireland., to the effect that as soon as the White Star line's new steamer Oceanic is out of the way, which will be early next year, her place will be taken by two vessels whose dimensions will exceed even those of the Oceanic. This vessel will be over 700 feet long, but the length of the new monster—whose owners do not transpire— will exceed that by 75 feet.

The last number of the Journal of the American Society of Naval Engineers is receiving much commendation from the professional journals of the country, and its value among technical men is becoming more and more recognized, as its high standard of excellence seems an incitement to fresh efforts on the part of the engineer officers of the navy having the matter in charge. Several original papers of high merit mark the November issue of this journal.

The schooner Biwabic was picked up in a gale this fall by the steamer Mark B. Covell, and now the owners of the steamer have put in a salvage claim of $6,000. The small steamers are taking very kindly to the introduction of the salvage principle on the lakes, and some of the bills which the underwriters are receiving for services rendered during the fall storms are rather steep. Several of the claims are for more than the vessels rendering the services are considered worth.

Revised Statute 5368, every person who, on the high seas, commits the crime of piracy as defined by the law of nations, and is afterwards brought into or found in the United States, shall suffer death. Also according to Rev. Stat. 5370, every person who, upon the high seas, or in any roadstead, or in any harbor, basin or bay, or in any river where the sea ebbs and flows, commits the crime of robbery, in or upon any vessel, or upon any ship's compass of any vessel, or the lading thereof, is a pirate, and shall suffer death.

Rock Island, situated in the straits of Mackinac, was sold for 5 cents recently at public sale by the register and receiver of the Marquette land office. It was put up and sold with Goose, Eagle and Haven Islands, to the highest bidder, who happened to be Wm. St. James, of St. Ignace. None of the islands contained an entire acre. Mr. St. James bid $1.25 an acre for the property. Rock Island contains one twenty-fifth of an acre. The only use to which any one of the islands can be put is to build summer cottages on them.

Mr. S. P. J. Thearle, who was recently appointed principal surveyor to Lloyd's Register of Shipping for the Tyne district, was presented on the 29th ult. by his colleagues in the Glasgow office with a testimonial of their esteem and regard in the form of a handsome standard reading lamp and dinner gong. Mr. T. J. Todd, the principal surveyor in Glasgow, in a few well chosen remarks made the presentation on behalf of himself and his colleagues. Mr. Thearle left on October 31st, for Newcastle, to take up his new appointment in the Tyne district.

From time to time, says the Dean of Bristol, in his "Phases of My Life," I met at dinner a great friend of Lord Gage's, Admiral Boyle. Invariably when we met, this admiral of the old school would come to me and say: "Do you, sir, read the account of St. Paul's shipwreck?" "Yes, it is the appointed lesson." "Well, all I can say, as an old sailor, is that if any captain in her Majesty's service handled his vessel as the captain of that ship did, he would have been court-martialed next day and dismissed the service." The account of Paul's shipwreck is given in the 27th chapter of Acts, which any mariner may read and criticise for himself.

An advertisement reduced to its lowest factor, is merely an introduction, nothing more. The whole world turns on advertising of different kinds. If there were no advertising there would be no acquaintance, no commerce, no "nothing." The first man who opened a store, and told his friends that he was going to do so, advertised himself. When he put up his sign he added another advertisement. And so on. There is no institution, no business, no profession in this world which does not advertise, the only difference being the method of advertising employed, whether it dates from before the flood, or whether it is modern and scientific. —Edith R. Gerry in Printers' Ink.

SHIP BUILDING AT NAGASAKI.

There has recently been delivered to the Nippon Yusen Kaisha what is said to be the largest steamship that has ever been launched outside of American or European waters.

The vessel is the Hitachi Maru, built to order by the Mitsu Bishi Company in its ship building yards at this port. She was about twelve months in the builders' hands, and before delivery to owners was subjected to survey by an officer sent especially from London. Her class is Lloyds' 100 A1, approved by the ship building encouragement law of the Imperial Japanese Government; type, 3 decks; material of hull, steel; length, 462 feet; beam, 49 feet 2 inches; depth, 33 feet 6 inches; draft, average, 25 feet; gross tonnage, 6,150 tons; displacement, 11,660 tons; freight capacity, 7,150 tons; engines, triple-expansion, double screws; boilers, four; indicated horse-power, 3,500, speed, 14 knots.

The Mitsu Bishi Company will immediately commence the construction of a sister ship to the Hitachi Maru for the Nippon Yusen Kaisha.

There has also been opened at this port by the Mitsu Bishi Company a new granite dock, of an extreme length of 371 feet; length on blocks, 350 feet; breadth, 78 feet, with draft of 23 feet at high water. This dock is close to the engine works of the company, which have been largely improved by the extension of the buildings and by the addition of machines of the latest type, including a large overhead crane of 30 tons carrying power in the erecting shop and new sheer legs of 80 tons capacity on the jetty for the landing and delivery of heavy boilers and machinery. The boiler shop, with its 105-ton riveting machine and other appointments, is now equal to the heaviest kind of work. A powerful steam hammer has been added, as well as other improvements necessitated by the increasing requirements of vessels and the larger type of ships now navigating the eastern waters. Rails have been laid from the sheers to and around the works with turntables, etc. A new molding shop of 50 tons capacity, with all the modern improvements, has been erected.

The ship building yard has been laid out for vessels up to 500 feet in length, and ground enough has been added for four vessels to be on the stocks at one time. Ships of 300 to 450 feet are now being built. The molding loft, with carpenter shops underneath, has been greatly increased in size.

The No 1 dock has been lengthened so that it can now take in vessels of the heaviest draft, up to a length of 500 feet; while the patent slip and siding can take vessels of over 1,000 tons register. The docks will accommodate five vessels of ordinary size at one time.

The Mitsu Bishi Ship Building Company, when busy employes 2,000 men; it pays laborers 60 sen a day, which is 30 cents gold; skilled workmen receiving from 1 yen (50 cents) per day upwards. This company is gradually advancing the pay of employees, for the reason that the cost of rent, fuel, clothing, and food to all classes has so increased as to render an advance necessary. The cost of living among all classes has increased enormously at this port—entirely out of proportion to the advance in wages and salaries.

CHARLES B. HARRIS, Consul.

Nagasaki, Japan.

EXPERIENCE WITH OUTBOARD AND INBOARD TURNING PROPELLERS.

Some interesting experiments on the direction of rotation of propellers have recently been carried out on Mr. Howard Gould's new twin-screw yacht Niagara, and the results of these have been communicated by Mr. T. J. Shaw, superintending engineer to the Harlan & Hollingsworth Co., who built the vessel to the Journal of American Society of Naval Engineers, from which we make the following abstract: The vessel is fitted with Lundborg shaft carriers instead of struts, and the keel is carried straight back to the rudder pintal without any opening through the deadwood abreast of the screws. At the trial the yacht drew 17 feet aft and 15 feet 9 inches forward, the displacement being 2,240 net tons. At the first trial the tops of the screws, 10 feet diameter and 13 feet pitch, with Griffith-shaped blades, turned inboard, the average revolutions being 128, and the average speed 12.54 knots, equal to a slip of 23.6 per cent. Thinking that the Lundborg extensions prevented the water getting to the screws properly, Mr. Shaw decided to increase the diameter of the screws by 6 inches, and the pitch by a foot. With this alteration the vessel was taken, on the same draught, over the same course, and, with an average of 126 revolutions, showed a speed of 12.8 knots, the slip in this case working out at 26.4 per cent. As a result of these trials, it was determined to run the screws in the reverse or outboard direction, and the vessel was accordingly docked to allow of the starboard screw being put on the port engine and the port screw on the starboard engine. Another run was then made, under the same conditions as to draught, etc., and it was found that, with an average of 118 revolutions, an average speed of 14.12 knots was attained, the slip being reduced to 13.3 per cent. The Niagara is, we may state, fitted with two sets of triple-expansion engines, each having three cylinders of 18 inches, 58 inches, and 45 inches diameter, by 30 inches stroke, steam being supplied at 160 pounds per square inch. Taking the trials in the order given, the horse-power developed worked out at 2,200 h. p., 2,100 h. p., and 1,950 h. p. respectively.

WRECKING LAWS.

Every person who plunders, or destroys any moneys, goods, merchandise, or other effects, from or belonging to any vessel in distress, or wrecked, lost, stranded, or castaway, upon the sea, or upon reef, shoal, bank, or rocks of the sea, or in any other place within the admiralty and maritime jurisdiction of the United States; and every person who wilfully obstructs the escape of any person endeavoring to save his life from such vessel, or the wreck thereof; and every person who holds out, or shows any false light, with intent to bring any vessel, sailing upon the sea, into danger, or distress, or shipwreck, shall be punished by a fine of not more than $5,000, and imprisoned at hard labor not more than ten years. Rev. Stat., 5358.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo	4,181,000	1,540,000	721,000	242,000	1,619,000
Chicago	2,622,000	4,340,000	700,000	183,000	406,000
Detroit	121,000	584,000	7,000	33,000	96,000
Duluth and Superior	2,331,000	1,101,000	43,000	69,000	279,000
Milwaukee	16,000	.....	3,000	7,000	51,000
Montreal	37,000	38,000	75,000	2,000	19,000
Oswego	.....	198,000	.....	.....	105,000
Toledo	261,000	481,000	111,000	16,000	.....
Toronto	156,000	.....	6,000	.....	51,000
On Canal	.....	9,000	.....	.....	40,000
Grand Total	26,738,000	17,846,000	5,361,000	1,228,000	4,002,000
Corresponding Date, 1897	34,744,000	40,680,000	14,349,000	3,681,000	4,889,000
Increase	2,623,000	.....	.....	204,000	162,000
Decrease	.....	2,516,000	183,000	.....	.....

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, in their usual weekly freight report to the RECORD state as follows:

Although the demand for prompt grain boats has not been particularly urgent, such fixtures have continued securing full rates; it will doubtless ere long be decided whether owners of near by tonnage, at the moment holding off for figures slightly in excess of shippers' bids, will manage to carry their point or have to submit to shippers' views. In any event, it appears unlikely that there is an interest of appreciable importance still uncovered for this month's loading. Freights for January are gradually approaching the figures for December tonnage, and there is more inclination on part of shippers to treat for February boats. The Gulf ports continue showing some enquiry for December and January vessels, whilst the demand at the Atlantic cotton ports is practically dead. Timber shippers in the Gulf, on the other hand, are yet disinclined to meet owners' demands, and the enquiry for boats outside of the carriage of our staples is very light.

We have not much of interest to report in regard to our market for sail tonnage, as the demand is light and the supply continues limited. The only redeeming feature of the market is a rather lively business in sugar from Honolulu to Delaware breakwater for orders, as specified in our subjoined list of charters.

WRECKING A FELONY.

The British Ambassador has furnished the Secretary of State with a copy of a notice issued by the government of the Bahamas for the information of the inhabitants of the outlying islands to the effect that certain vessels in distress were robbed by persons inhabiting the outlying territory in December and January last.

The notice calls attention to the fact that persons committing such acts are guilty of felony and, on conviction, are liable to be kept in penal servitude for any term not exceeding 14 years.

WRECK COURT OF INQUIRY ON THE LOSS OF THE MOHEGAN.

As an indication of how the causes leading up to wrecks and important casualties to vessels are inquired into by the British government, we herewith present the list of questions which had to be determined by a competent court on behalf of and under the auspices of the Board of Trade, a goverment bureau which in a measure corresponds with our Steamboat Inspection Service. The list of nineteen questions are as follows:

1. Was the vessel in good and seaworthy condition when she left the Thames on October 13th last, and was she sufficiently ballasted?
2. What number of compasses were on board, were they in good order and sufficient for the safe navigation of the vessel, when and by whom were they last adjusted, and by which compass was the vessel steered?
3. Was the vessel wired on the double wire system, and could the compasses have been affected by the electric current?
4. Was the vessel supplied with boats and life saving appliances required by the statute, and were the boats so carried as to be at all times fit and ready for use?
5. Was the vessel supplied with lamps independently of the electric lamps, and were they kept trimmed and ready for use and accessible?
6. Was the vessel supplied with proper and sufficent signals of distress?
7. Was the vessel sufficiently officered and manned?
8. Was the master in good health, and did he give proper personal attention to the navigation after leaving the Thames?
9. At what distance was the Eddystone light house passed about 4:15 p. m. on October 14th, and what was the course steered after passing the light house?
10. Was a light seen and reported shortly after 6 p. m., and, if so, was this St. Anthony's light? Were the Lizard lights seen, and, if not, why were they not seen?
11. Was a good and proper lookout kept?
12. What was the cause of the stranding of the vessel?
13. What were the circumstances in which so few distress signals and no lamps were exhibited after the stranding of the vessel?
14. What were the circumstances in which only one boat with passengers successfully left the vessel?
15. Was every possible effort made by the late master, officers, and crew to save life, and was good discipline maintained after the casualty?
16. Were prompt and proper measures taken by the coast guard at Coverack and by the coxswain of the life boat at Porthoustock to render assistance?
17. What were the circumstances in which the Porthoustock life boat did not rescue those in the rigging until about midnight on October 14-15?
18. What were the circumstances in which the services of the Falmouth life boat were not requested until 9:15 p. m., the services of the Cadgwith life boat were not requested until 9:55 p. m., and the services of the Lizard life boat were not requested until 11:20 p. m., on October 14th? Were the respective life boats promptly launched, and what were the circumstances in which they failed to rescue any of the passengers and crew?
19. What were the circumstances in which this casualty was attended with the loss of so many lives?

It transpired in the course of the inquiry that Capt. Griffiths had been a hundred times across the Atlantic each way, had been in the company's service for 12 years, and had never lost a ship or met with a serious accident. The evidence showed that the captain was an efficient and capable officer, and that at the time of the mishap he was in excellent health, also that when the vessel was wrecked he and his officers and crew did everything possible to save life. One witness did not consider that the electric light could have had any influence on the compasses. Reference was made to the efficiency of the steel boats which, "although they came on shore in a very rocky place, were only bulged, whereas wooden boats would have been reduced to matchwood."

The court found that the vessel was in a good and seaworthy condition when she left the Thames on the 13th of October; that the compasses could not have been affected by the electric current; that the boats were so carried as to be at all times fit and ready for use; that the master was in good health; that the vessel passed Eddystone light-house at a not greater distance than three miles, and that the course steered after passing the light-house was W. by N.; that a proper lookout was set, but, naturally, the court was not prepared to say that a proper lookout was kept; that the cause of the stranding was that a wrong course, W. by N., was steered after passing the Eddystone; that every possible effort appears to have been made by the late master, officers and crew to save life; and that good discipline was maintained after the casualty. The court was strongly of the opinion that where a vessel is lighted with electric light she ought at night always to have lighted and in an easily accessible position oil lamps to take the place of the ship's lamps in case of failure of the electric light.

MARITIME LAW.

THE WHITLIEBURN.

(*District Court, S. D., New York, July 27, 1898.*)

JETTISON—CRANKNESS OF NEW SHIP—TOP HEAVY LOADING—BALLASTING—HARTER ACT.—On claim to damages for jettison of part of a cargo of case oil, made necessary by top-heavy loading of a new ship and insufficient ballasting, held (1) that the risks of loading for a first voyage fall on the owner, and not on the charterer or shipper, who are guaranteed seaworthiness in all respects at the time the ship sails. (2) That the Harter act does not release the owner's previous liability in this regard, but by its first section confirms it; since the proper ballasting of a light cargo is a necessary part and incident of the "proper loading and storage" of cargo.

BROWN, District Judge. The ship Whitlieburn of 1,874 tons net register had loaded with 86,600 cases of petroleum oil during heavy weather on December 25 and 26, 1895, when 12 days out, on a voyage from Philadelphia to Japan, jettisoned 3,218 cases, of the alleged value of $4,719.20. The above libel was filed by the insurers of the cargo to recover the amount paid to the assured on the ground that the jettison was made necessary by the negligent stowage of cargo and the insufficient ballasting of the ship. The answer denies any negligence or insufficiency of ballast; and alleges heavy weather and sea peril to be the proper cause of the loss; that the ship was seaworthy when the loading began, and that if there was any negligence in loading or in ballasting it was done under the supervision and inspection of the charterers, and by stevedores nominated by them, and was part of the "management of the ship" within the exemptions of the third section of the Harter act, which formed a part of the conditions of the bills of lading.

1. The evidence leaves no doubt that the ship as loaded was tender. The pilot who took her out so stated to the captain on leaving her. According to the protest, in a gale on December 20th "she lay well over, and took large quantities of sea water on board." In a squal on the 24th of December she was thrown on her beam ends, but soon righted, without shifting her cargo. After this she was run before the wind several hours, "with much water aboard and burying herself," "for the sake of all concerned;" early on the 25th she was brought to the wind on the port tack, "lying with the lee boats in the sea;" the crew took to the rigging; three were washed overboard, of whom one was drowned; at 7:30 a. m. on consultation it was determined to jettison a part of the cargo, and the upper cases in the 'tween-decks were thrown overboard, after which the ship pursued her course without special difficulty.

The ship was not tender in her model or construction, but of the usual build in modern ships of her class. In herself she was in all respects seaworthy. This was her first voyage. She came from Glasgow with 1,800 tons of ballast, and before loading with oil she discharged all her ballast except 100 tons of stone, which was left as ballast in her limbers. The evidence shows that 100 tons of ballast is usually sufficient for such cargoes in vessels of the same general description as the Whitlieburn. Some can carry such cargoes without any ballast. The master judged that 100 tons would be sufficient for the cargo taken aboard, which made her draft 1½ inches less than her load line. Other experts examined on the trial considered 100 tons of ballast sufficient, judging from the general plan and model of the ship, as well as from her previous behavior. Yet that amount of ballast was plainly insufficient for the Whitlieburn with the cargo which she took on board. The cargo filled her lower hold and all the 'tween-decks except a space sufficient for about 1,500 cases in the latter.

The testimony showing that different amounts of ballast are required for such cargoes by different ships of the same general plan and model, also sufficiently shows that a mere general observation of a ship's measurements and cargo spaces is not sufficient to determine the necessary amount of ballast with any accuracy, though it is quite probable that the necessary amount may be ascertained by careful computations based on the ship's measurements and the bulk and weight of the proposed cargo. In the absence of any such careful ascertainment, or any previous specific trial of the ship, it would seem to be the reasonable duty of the owner and master on a first voyage in taking a light and tender cargo like case oil, to keep well within the line of safety as respects ballast and loading; and to bear the risk of any uncertainty in these regards. Such a risk certainly cannot fall upon the shipper or charterer, especially not in a mere charter of affreightment, like the present, where the ship is guaranteed to be "tight, staunch and strong, and in every way fitted for the voyage." This guaranty speaks from the time the ship sails and makes the owners responsible for her seaworthy condition, not as regards her hull and equipment alone, but also as respects ballasting and the loading and stowage of cargo. Sumner v. Caswell, 20 Fed. 249; Bowring v. Thebaud, 5 C. C. A. 640, 56 Fed. 520.

2. The Harter act (2 Supp. Rev. St. p. 81) does not exempt the ship or owners in this case. Had the ship in her loading and ballasting been perfectly seaworthy, as she undoubtedly was in her hull and equipment, and had the jettison been not only a mistake but legally unjustifiable, the third section of the Harter act might have covered the case, as damage arising on the voyage from fault in the "management of the ship;" since the jettison, though unnecessary, would still have been made for the purpose of relieving and preserving the ship and all interests concerned. The Glenochill [1896] Prob. 10. But here the jettison was made necessary by the unseaworthy condition of the ship, consequent entirely upon the mode of loading, stowing and ballasting before she sailed. If this can be called "management of the ship" at all, it is in a remote sense only, and not in the sense in which that phrase is used in the Harter act. On the contrary, the loading, stowing and ballasting of a light cargo are all so interdependent on one another, as effecting the seaworthiness of the ship, that they all fall under the first section of the act, which expressly confirms the owner's previous responsibility; and to cases which fall under the specific provisions of the first section, the general exemptions of the third section are not applicable. Worsted Mills v. Knott, 76 Fed. 582, 584; The Colima, 82 Fed. 665.

The first section of the Harter act expressly declares that it "shall not be lawful for the owner to insert in any bill of lading or shipping document any clause, covenant or agreement, whereby he shall be relieved from liability for loss or damage arising from negligence, fault or failure in proper loading, stowage," etc. "* * * of any merchandise," etc. The "proper loading and stowage" of cargo clearly include not only the proper distribution of the cargo itself, but the ballasting necessary to accompany it in order to prevent the vessel from being top-heavy and unfit for sea. With a light cargo its amount and distribution in "proper loading and stowage," are so dependent, as I have said, upon the amount and location of ballast, that ballasting becomes a necessary part and incident of loading.

Decree for libelant with costs.

DULUTH-SUPERIOR COMMERCE.

From the annual report of Major Clinton B. Sears, Corps of Engineers, U.S.A., to the Chief of Engineers, Washington, D. C., upon the improvement of rivers and harbors on Lake Superior, it is learned that the lake commerce of Duluth and Superior during the last season of navigation amounted to over $118,500,000, as a very conservative valuation.

The system of vessel reports has been kept up and the commercial statistics accompany the report.

COMPARATIVE TABLE OF VESSEL COMMERCE OF THE PRINCIPLE OCEAN AND LAKE PORTS OF THE UNITED STATES, AS COMPILED FROM THE ANNUAL REPORT OF THE CHIEF OF ENGINEERS FOR 1897:

NAME.	Tonnage.	Valuation.
New York	a 19,303,721 R.	b $1,903,752,509
Philadelphia and Delaware river	a 15,268,365 F.	a 623,896,493
Chicago, South Chicago, and Michigan City c	a 14,394,736 R.	d 120,000,000
Duluth-Superior	a 13,353,068 R.	111,676,900
Buffalo	a 11,053,206 R.	d 100,000,000
Baltimore	a 6,868,120 R.	b 97,029,363
New Orleans	b 3,774,688 R	b 116,304,668
Boston	a 3,578,190 R.	a 194,765,282
Portland, Ore	a 696,796 R.	b 8 346,824
Savannah	b 577,016 R.	b 23,038,848
Mobile	a 375,180 F.	a 10,131 288

a Foreign and domestic. c Chamber of Commerce report.
b Foreign only. d Estimated.

Attention is invited to the comparative table above, showing the vessel tonnage of eleven of the principal seaboard and lake harbors. This shows that Duluth-Superior harbor is the fourth in the United States in the amount of its vessel tonnage, and sixth as to the value of its marine commerce. The statistics for Duluth-Superior harbor are as accurate as it is practically possible to make them, being compiled from the individual reports of each trip of every vessel in or out made directly to the engineer's office. The statistics for the other places are at best but approximations, and are probably exaggerated.

VESSELS CLASSED.

Vessels classed and rated by the American Bureau of Shipping in the Record of American & Foreign Shipping this week are as follows: American ship, St. David, owned by Messrs. Flint & Co.; schooner, S. C. Glidden, owned by Messrs. Dunn & Elliott; 3-masted schooner, Hilda, and British schooner, Onyx.

NOTES.

BY direction of the Navy Department the yacht Sylvia was this week turned over to the Maryland Naval Militia for a practice ship. This vessel is one of the finest of the war yachts and is now at Norfolk undergoing repairs. She will leave within ten days and become then permanently attached to the miltia service.

The returns of the Clyde ship building industry show the best returns for ten years, both as regards launching and work in hand. During the past 11 months 246 vessels, representing 380,000 tons, have been launched, as compared with 222 vessels, aggregating 278,000 tons, last year. Fifty thousand tons of shipping have been booked for construction in December, and the naval work in hand is the greatest ever known.

FOR the last twenty years there has been a steady decline in the number and tonnage of American ships arriving at Liverpool. In 1876 there entered 416 vessels flying the American flag, with a tonnage of 502,409; in 1880, 202 vessels with a tonnage of 329,936; in 1890, 51 vessels with a tonnage of 104,322; in 1896, 12 vessels, with a tonnage of 28,237; and from January 1, 1897, to September 7, 1897, 7 vessels with a tonnage of 18,058.

A RESOLUTION was offered by Senator Chandler this week directing the Committee on Naval Affairs to inquire into the merits and advantages of the use of the pneumatic system on board ships of the navy. This includes pneumatic gun carriages and pneumatic steering gear, snch as is now successfully in use on the monitor Terror, and which showed such remarkable results in the bombardment of San Juan. Many people in Washington city have been interested in the use of this system.

CARDIFF in South Wales is a great coal shipping port. Total shipments in the year 1896 were 15,335,019 tons, in addition to which nearly half a million of other mineral products were exported, the vlaue of the aggregate being nearly $31,000,000. The gross output of minerals for the South Wales district in 1895 was nearly 35,000,000 tons and and in 1896 exceeded that amount. For the first half of 1897, 7,473,205 tons of coal were exported from Cardiff. It is on record that a ship carrying 9,000 tons of coal has been loaded and trimmed in 28 hours.

ONCE again truth follows closely upon fiction. In the Warstock, by Mr. Wirt Gerrare, published only last month, is described a wonderful machine which abolishes modern explosives. Now just such an engine as this, and acting in the same way, has been patented in the United States by Mr. Nicola Tesla who, by projecting into the air electric currents of such voltages that the disturbances extend many miles, fires any explosive within the range of the electric disturbance. This will revolutionize modern methods of warfare as Mr. Gerrare has shown in his novel.

IT appears from the Engineering News that stones or pebbles, when in close proximity to metal pipes which have been subjected to electrolytic action, are electro-plated with the metal of the pipe, whether lead or iron. The following are some interesting remarks on the subject taken from a report of Mr. E. E. Brownell, of Dayton, O. He states that wherever any electrolytic action has attacked the cast iron mains, there remains upon or adjacent to the mains a black substance that is due to the nascent oxygen being liberated from the decomposed water oxidizing the iron in the pipes, and this iron is then carried or held in solution by a solvent which is formed by the reaction of a current of electricity upon the constituents of the soil; from this solvent the iron, lead, or whatever metal it has attacked, is taken or given up, to be deposited or electro-plated upon the soil and stones to the distance of several inches.

CONSIDERABLE interest attaches to the new steam turbine-driven torpedo boat destroyer, which the Hon. C. A. Parsons is now building for the British Admiralty at his ship building yard on the Tyne. He also has one in hand for a foreign power. The boat is to be 200 feet long, with an I. H. P. of 10,000, which is to enable her to steam at the very least 35 knots or 40 miles an hour. She will be twice the length, six times the width, and is to develop a horse-power five times greater than the little Turbinia, which aroused such interest at the time of the great naval review twelve months ago. Although Mr. Parsons only gives 35 knots as the speed of the boat he has in hand, he hopes to be able to get a much higher speed, in fact, 45 miles an hour out of her. It is noteworthy that Mr. Graydon, an American engineer of some note, proposes building a turbine-driven boat with a higher speed even than this, but instead of two propellers he would have 36. He also has a scheme for applying the turbine idea to cruisers and battleships, which, if the reports can be believed, are to travel at something like 35 knots.

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CLEVELAND, O., DECEMBER 15, 1898.

LIGHTS, buoys and stakes, Weather Bureau signals, as well as the crews of life-saving stations on the lakes are being discontinued this week.

CONGRESSMAN BURTON, of Cleveland, recently elected chairman of the House Committee on Rivers and Harbors has done, is in a position, and willing to do everything possible to advance lake marine interests.

TO THE Hon. Colonel R. C. Parsons must be awarded the honor of securing the first appropriation for the breakwater at Cleveland, he also took the initiative and carried through the law providing for a life saving station at that port. Col. Parsons is no longer in politics or statesmanship but when a member of Congress and on the commerce committee, he was credited with well advised, noble, energetic work, in the interests of his constituents of the twenty-first congressional district.

IF THE owners of vessel property are to organize a mutual indemnity steamship association, as they might do by a classification of the most important fleets, one of the first objects to attain would be the services of a first-class towing, salvage and wrecking steamer. Something that could hook on to a small island and tow it away, always get what she went after, and command good stiff figures for her services when rendered to the property of those outside of her ownership.

THE mean date of the close of navigation at Duluth for the past fourteen years may be placed at Dec. 14, assuming that traffic ceased this year on Dec. 12. The opening of navigation on April 5, this season was the earliest for the above period, April 17 was the mean for ten years and May 8, for four years, though navigation has only been open once in May (1893, May 9), since 1888. The average sized vessel tonnage frequenting or trading to the head of the lakes in 1885 was 761 and in 1897, 1,386 tons.

THE query now presents itself to the owners of small wooden steamers as also to those who control medium sized iron and steel craft, how to make expenses, not to mention any attempt to write off a depreciation account or to make a bluff at a dividend paying surplus. We would suggest that unless there is hopes of a Welland canal trade or a special route can be secured between shoal water ports, that the machinery be taken out of these craft and they be transformed into tow barges without any more loss of time. A few seasons hence even tow barges will require to be of the two, three or even four thousand ton type.

WRECKING TUG AND ICE BREAKER.

This is the season when a large powerful ice breaker, salvage and wrecking steamer fully equipped for heavy work would be found the most valuable and money making bottom afloat on the lakes. The stock of such a craft divided pro rata, according to tonnage, among the most prominent vessel owners would certainly prove a paying investment. She would get everything she went after and thus prove invaluable to the underwriters, such a craft could convoy the early spring fleet, do a general patrol business through the the summer months and lead vessels into port when they got nipped in the young ice during the fall, or at such times as the condition existing for the past several days set in. With such an outfit several vessels that are now bleaching their bones on the beach might have been placed in dry dock. It partakes of the ridiculous to send a couple of light harbor tugs with a questionable pumping outfit, hawsers, anchors, jack-screws, etc., towing a nondescript lighter without loading or discharging facilities to make pigmy attempts at floating a three to six thousand ton loaded vessel. The result of such abortive attempts always marks a total failure, unless, and only, under the most favorable conditions. Such a craft as we have mentioned should be under the immediate control of vessel owners, it would not be advisable to let underwriters, their general agents or associates in on the ground floor of such an adventure, as the major portion of the costs of up keep, dividend account, etc., would be coralled from that source. It now seems as if it would only be a question of another season or two before such a craft as we have suggested will be put afloat and our principal object in calling attention to this future departure is to suggest that time be taken by the forelock so that the ownership and management may be placed in the proper hands from the inception of this innovation in lake practice.

NOT AN IDLE DREAM.

"If it should come to pass that the views of the Anglo-American ommission are carried out it will mean much for Cleveland. A committee is now in session in Washington and is seeking to abrogate the treaty between England and the United States which in one of its provisions forbids the construction of warships upon the Great Lakes. It is not generally known, but it is nevertheless a fact, that next to Clyde Cleveland is the greatest shipbuilding port in the world. Should the treaty be abrogated Cleveland would, within its physical limitations, be enabled to compete for naval contracts. The locks of the Welland canal permit the passage of boats 250 feet in length and having a draft of 12 feet. Within these limitations Cleveland could compete with the world and it would not be surprising if it could build boats a little better and a little cheaper than any other place. The city is directly in the center of the steel producing district and would be able to save enormously on freight rates. It would certainly prove a fierce competitor of coastwise cities for the lesser craft needed by the government. Indeed it is easy within the possibilities of the future to see Cleveland constructing gunboats for Japan."

The foregoing is taken from the usually reliable editorial columns of the Cleveland Evening Plain Dealer. The pith of the article is the shipbuilding facilities of Cleveland wherein the same old chestnut, made out of whole cloth, is once more perpetrated.

The writer must be totally ignorant of the ship and engine building industry on the river Clyde, as he says, "next to Clyde, Cleveland is the greatest shipbuilding port of the world," and goes on to say, "that although this is not generally known it is nevertheless a fact," etc.

It is the province of the MARINE RECORD to uphold, support and advance by all proper means the important industry of shipbuilding on the lakes and this, too, in all of its branches, even to the production or manufacture of the smallest item entering into the outfit or equipment of the various classes of vessels. In this connection we have been called upon several times in the past to explain this "Clyde comparison," originating, we believe, when Robert P. Porter, late superintendent of the Census Bureau, delievred an oration before a public body in Cleveland.

Once more we may point out that the river Clyde, say from Greenock to Glasgow, is about 28 miles in length, and for this entire length there is a shipyard, engine and boiler works, etc., about every mile apart, or, taking both sides of the river, say upwards of fifty shipyards on about as many miles of river frontage, compared to two, or rather only one shipyard at the present time in Cleveland, the other having recently moved to the suburbs, if Lorain will pardon us for the friendly allusion. We then have one shipyard, say, 2,000 to 3,000 feet in length, compared to fifty shipyards extending over fifty consecutive miles, inclusive, on either side of the banks of the river Clyde, or as we have said, between Greenock and Glasgow. Surely this statement will down the nonsensical comparison for another while.

While again touching upon this subject it is perhaps admissable to state that the Harland & Wolff shipyard at Belfast, Ireland, could probably turn out at this time as much tonnage annually as the lake shipyards combined have turned out hitherto in any one year, so if we wish to quote the enormous shipbuilding facilities of Cleveland let us not forget to rank with the one yard at Belfast, Ireland, and that will be glory enough besides clearing us of the charge of being monumental irresponsibles wherein the truth is concerned.

A great big northern Ohio daily, of nearly three score years' standing, ought not to let such rubbish as we have quoted disfigure its columns, and it ought to have some one on its editorial staff who could recognize the difference between a slice of the old river bed at Cleveland and the proud banks of the bonnie Clyde, teeming as it is with the busy hum of shipbuilding industries and allied interests. There is a future for Cleveland as well as the shipyards at other lake ports; the art, or at least the practice of naval architecture is yet in its infancy on the lakes. In the last decade we have gone from wood and composite shipbuilding to iron and steel and its limit can not be foreshadowed by even the most liberal and advanced mind at the present time. The 600-ton wooden craft of a little over a decade ago is now merged into the 6,000-ton high-classed, liberally equipped, everlasting steel steamer, and who is to say how, where or when the limit is to be placed as to the volume of production, size, model or speed of lake-built vessels, as time but shows that the most extravagant and apparently insane ideas regarding construction of to-day is the accepted and rational means of carriage by water of the morrow.

IN VIEW of the difficulty experienced in lowering boats and getting them safely away from the side of a vessel in a sea-way, a contemporary suggests that small "boats should be launched bow outwards from the side of the vessel with sufficient way on them to clear the hull, to avoid all risk of staving in." In the first place boats are not launched from the side of a vessel, secondly, a lee side must always be found for getting boats in the water, and thirdly, as the parsons say, with the sea forward of the beam, 'thwart ship launches would usually result in swamping them.

MASTERS, engineers, pilots and others who have had the MARINE RECORD sent to the St. Mary's Falls delivery or the marine delivery at Detroit will please notify us of their home address and not expect or wait for this office to look them up individually. We of course are aware that navigation has closed, we are also personally acquainted with a large number of subscribers, but we are not supposed and in fact do not know just where they will find good holding ground to rusticate, and, or hibernate during the winter months.

THE cold spell struck Lake Erie first this season. Lake St. Clair, instead of Mud or Hay Lake, heralded the approach of the Ice King, and the west end of Lake Erie caught a fleet of over fifty large, powerful steamers in the ice jam. Perhaps some of our hydrographic and meteorological scientists can work the ice down as far as the Niagara river, or even Lake Ontario, for next season, preparatory to an earlier closing of the St. Lawrence river and upper Gulf ports, while the north wind blows its balmy and salubrious breezes over Lake Superior.

THE annual report of Major Clinton B. Sears, Corps of Engineers, U. S. A., to the Chief of Engineers, Washington, D. C., on the improvement of rivers and harbors on Lake Superior, commercial statistics, lake traffic, etc., has just been issued. As usual we find the report concise yet full and complete in all of the particulars it touches upon. It is probable that lake traffic statistics are kept more accurately at the head of the lakes than anywhere else, except at the St. Mary's Falls canal. Major Sears evidently believes in figures that don't lie.

The question of the week has been centered on how to release the ice bound fleet in the west end of Lake Erie. The energetic manager of one of the largest lines on the lakes grasped the situation and went about the work in a business-like ship shape manner and sent about three score vessels on their way rejoicing to be freed from the clutches of the Ice King. There has been no newspaper notoriety about the manner in which this work was accomplished, but we look to see a due appreciation evinced at a later date.

In a comparison of statistics of traffic through the Suez and Sault Ste. Marie canals for this year, the compiler gives the number of vessels locked through each canal. It is just as well, for the sake of accuracy, to point out that there are no locks in the hundred miles of navigation contained in the canal Suez.

COAST YACHT BUILDING.

The New England Ship Building Co., Bath, Me., has received a contract to build two more barges for the Consolidation Coal Co., Baltimore, Md. The last new barge was launched December 3.

"The contract for Mr. Drexel's (Col. A. J. Drexel, N. Y. Y. C.) new yacht, to the design of Mr. G. L. Watson," says the Field, November 26, "has been placed with Messrs. Scott & Co., Greenock. Her principal dimensions are: Length, 268 feet; beam, 36 feet; depth, 20 feet, molded to main deck; of 1,630 tons net and 1,810 gross. The builders will supply twin screw engines, having four cylinders and working four cranks, to develop 5,000 horse-power and a speed of about seventeen knots. The new yacht is to be fitted in a most luxurious manner."

The large steel seagoing tug Swatara, being constructed for the Reading Railway, was successfully launched on Saturday, from the Neafie & Levy shipyard, Philadelphia. Miss Florence E. Taylor, daughter of F. W. Taylor, general shipping and freight agent at the Reading's Port Richmond wharves, christened the new craft. The Swatara, when completed in January, will ply between this port and Boston. She will be used in towing coal barges. Her dimensions are: Length, 170 feet; beam, 29 feet, and depth, 18 feet. She will be equipped with the latest improvements, including steam steering gear.

The steam yacht Corsair, now building at the yards of T. S. Marvel & Co., Newburg, for Commodore J. Pierpont Morgan, of the New York Yacht Club, was launched on Monday last and towed to Fletcher's yard, Hoboken, where she will be completed. She will be put in commission probably in May. The plans for the yacht were drawn by J. Beaver Webb, of New York City. Her dimensions are: Length on water line, 250 feet; length over all, 300 feet; breadth, 33 feet; molded depth, 22 feet, 5 inches. Corsair is one of the longest yachts ever built on this side of the water. The keel was laid on June 1, and a gang of 225 men has been working on her since that date.

It is expected that the decision of the Secretary of the Navy to retain all the vessels purchased during the war will have the effect of causing a boom in American shipbuilding. It comes just at a time when there is an unusual demand for ships flying the American flag on account of the expanding commerce of the United States in general and particularly on account of the decision of the administration to confine trade between American ports and Porto Rico to American vessels. The navy, in preparing for war, drew very largely upon the tonnage of the coastwise and foreign lines sailing under the American flag and the business of these lines cannot be restored to its former proportions until vessels have been built to supply the places of those taken by the government.

W. J. Parslow, of the Gas Engine and Power Co., of Morris Heights, N. Y., has been in Bangor, in consultation with Hon. E. H. Blake, who has under consideration the purchase of a seagoing steam yacht. Mr. Blake, who is one of the most enthusiastic yachtsmen on the coast, has found his fast but diminutive Rex too small for extended cruising, and now intends to have a boat in which he can visit any country, no matter how rough the weather or how broad the sea between. The Gas Engine and Power Co. is one of the famous yacht concerns in the country and has built some of the finest private craft afloat. Mr. Blake's new boat will be a great addition to yacht property on the coast. He has as yet made no definite plans, but is looking over designs with Mr. Parslow.

The steam yacht Aphrodite, built by the Bath Iron Works, Bath, Me., for Oliver H. Payne, of New York, was launched successfully. The yacht is the largest ever built in the United States and the specifications demanded the finest. Her dimensions are: Length of hull, 300 feet 6 inches; length of load water line, 258 feet; beam, 35 feet; depth of hold, 20 feet 6 inches; mean draught, 15 feet; gross tonnage, 1,300. The yacht has triple-expansion engines, the largest ever placed in a steam yacht giving 3,200 indicated horse-power, which will drive the yacht under ordinary conditions at the rate of 15 knots. The yacht will be bark-rigged and will carry sufficient canvas to enable her to be a speedy sailer. The deck house is of steel, covered inside with richly carved mahogany and is 160 feet in length. The yacht will have an unbroken promenade from stem to stern. She was designed by superintendent Charles R. Hanscom, of the Bath Iron Works, who also designed W. A. Slater's Eleanor, R. H. White's Peregrine, and Eugene Tompkins' Illawarra.

RELIABLE STATISTICS WANTED.

Secretary Ferry, of the Detroit Chamber of Commerce, has sent a letter to Senator McMillan and Congressman Corliss, calling their attention to a report made to the Bureau of Statistics by George Tunell, of Chicago, on lake commerce for 1898, and transmitted to Congress by Secretary Gage. Mr. Tunell says :

"I must say that the statistics of traffic on the Great Lakes collected by the national government, are simply an object of ridicule and contempt among those engaged in lake transportation. The statistics of the commerce of the Detroit river are so unreliable that no attempt was made to report it in 1897, and Col. Lydecker informs me that the reports in previous years are merely guesses. It is of the utmost importance to Detroit that some reliable data should be secured upon this subject."

Secretary Ferry urges the importance of congressional action.

No one knows better than Senator McMillan what reliance can be placed on lake statistics as at present compiled, or rather neglected. If we remember right the Senator himself was one time challenged on the floor of the Senate to produce proofs of the authenticity of certain rather questionable lake statistics. This has been a feature that the RECORD has always been very chary about handling, though others rather less conscientious have ignorantly rushed into figures in the past.

TO LOCATE DOCK LINES.

The Board of Engineers, members of the Corps of Engineers, U. S. A., appointed by the War Department to fix the dock line for Howard's Pocket at West Superior, met this week and listened to the representations of the various persons interested. The board is comprised of Maj. C. B. Sears, of Duluth, Maj. F. T. Abbott, of St. Paul, and Capt. James G. Warren, in charge of the Milwaukee district.

Among those that appeared before the board were Capt, Alex. McDougall and James Bardon. Superior was represented by its city attorney and engineer. J. L. Washburn represented Peyton, Kimball and Barber. The board assembled later at the office of Maj. Sears' Duluth, to formulate its report, which will be forwarded to the Chief of Engineers and thence to the Secretary of War.

ASHTABULA'S CLAIMS.

At a meeting held at Ashtabula on Monday night last the following citizens were chosen to go to Washington as a delegation to appear before the River and Harbor Committee on Thursday to present the claims of Ashtabula harbor for an appropriation: Hon. W. S. McKinnon, mayor; C. E. Richardson, J. H. Hotchkiss, W. W. Kungle, L. W. Jarvis, George Hall, Frank Flower, J. P. Manning, Frank Manning, T. H. Cheney, Hon Henry Apthorp, representing the Lake Shore Railroad Co.

The Pennsylvania Company has been asked to send Judge T. E. Hoyt to represent them. The Pennsylvania Company will furnish transportation for the party. The delegation takes with them statistics of the immense business done at Ashtabula in thirteen years past. The report for the season just drawing to a close shows 1,474 arrivals, 1,436 clearances. 2,722,003 tons of ore received, and 1,188,541 tons of coal shipped.

Captain Charles O'Neill, chief of the Bureau of Ordnance of the Navy Department, reports: "Experience has shown that guns in turrets operated by electric power can be laid upon more accurately, and made to follow a moving target than when operated by steam, hydraulic, or pneumatic power. There are no water pipes to freeze, no steam pipes to burst, and no delay in obtaining a full working pressure, and no troublesome or exhaust pipes to deal with. A burned out fuse can be replaced quickly, or a broken wire repaired, and as the wires can be laid below the armored deck, there is little liability of the latter becoming necessary." The line officers of the Navy are in favor of it for the above reasons. The engineers are in favor of it because it is much easier to operate and repair than a hydraulic or pneumatic system. During the recent operations under Admiral Sampson, several accidents to hydraulic apparatus occurred, and the electrical fittings used for the same purpose was favorably commented on by the officers. It is highly probable that complete electrical fittings will be made in the new warships to be built for the United States Navy.

CANDIDATES FOR INSPECTOR OF HULLS.

STEAMBOAT INSPECTION SERVICE. DISTRICT OF PITTSBURG, PA., (STEAMBOAT INSPECTION SERVICE, TREASURY DEPARTMENT) JANUARY 10, 1899.

The United States Civil Service Commission announces that on January 10, 1899, examination will be held at any city in the United States where it has a Board of Examiners, for the position of Inspector of Hulls, Steamboat Inspection Service, (Treasury Department) for the Steamboat Inspection Service, District of Pittsburg, Pa., at a salary of $1,800 per annum.

The examination will consist of the subjects mentioned below, which will be weighted as follows :

Letter writing	10
Arithmetic (consisting of problems in common and decimal fractions, mensuration, and square root)	10
Hull construction	30
Pilot rules and inland navigation	20
Life-boats and life-rafts	10
Experience	20
Total	100

Two (2) days will be allowed for this examination.

Applicants for this examination must have had at least five (5) years practical experience as master or first-class pilot of steam vessels. A portion of this five (5) years must have been within the seven (7) years next preceding the date of application. The five (5) years experience must have been under United States license of the highest grade granted upon the waters on which the applicant has been so employed. The fact that he is so licensed must be of record in the Treasury Department.

Applicants must be free from the defect of color blindness.

This examination is open to all citizens of the United States who comply with the requirements, without regard to race or to political or religious affiliations. All such citizens are invited to apply ; but attention is invited to the fact that in making certifications to fill this position preference will be given to those eligibles who are legal residents of the Pittsburg Pa. Steamboat Inspection Service District, which embraces the 20th, 21st, 22d, 23d, 24th Congressional Districts of Pennsylvania.

Persons desiring to enter this examination should at once write to the United States Civil Service Commission, Washington, D. C., for application blanks, (forms 304 and 363) which should be properly executed and promptly forwarded to the Commission at Washington.

December 13, 1898.

DETROIT MARINE POST OFFICE.

LETTERS REMAINING ADVERTISED IN DETROIT, MICH., POST OFFICE DECEMBER 15, 1898.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

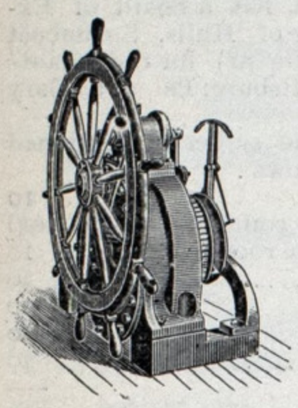
Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Blooming Frank
Black Patrick
Booetz Earnest, Str. Tampa
Bennett Capt. J. H., Schr. De Wolf
Crowley Jas. A., Schr. Smith
Collier Jas., Schr. De Wolf
Cranson, P. A., Str. Coralia
Cook, Frank B., Str. Ogemaw
Dunn J. W , Str. Hoyt
Granger Mrs. M.
Harrison Wm., Str. Cadillac
Johnson Mrs. Julius, Schr. Fitzpatrick
Johnson C. E., Str. W. P. Ketcham
Joineter Wm., Schr. Covell
Karlson T. G., Schr. Magnetic
Kundsen Tilley, 3, Schr. Fitzpatrick
Marsh Mrs. S. O.
Mitchell Martin
Nerigenwether J.
Navaugh, P. J.
Nugent Otter, Str. Cleveland
Peters Claud, 4, Str. W. P. Ketcham

To prevent the engines of a vessel from racing when the screw rises above the water, Sig. E. Putalo has invented an electrical regulator. It consists of two vessels of mercury, connected at the bottom by a tube, and mounted fore and aft in the ship. The vessels are about half full at normal depth. When the ship pitches forward so as to raise the screw, the rods connected with the resistance are submerged one after another so that an electro magnet is brought into play, the whole resistance being short-circuited when the screw is quite out of the water. The electro magnet operates a throttle valve in the main steam pipe, which is thrown open by another magnet. By this arrangement the steam is turned off and on. From experiments it has been shown that the mercury vessels need not be more than 34 inches apart in a ship 300 feet long.—Ex.

A PENSION of $30 per month was granted Wednesday to Mrs Harriet Vincent Gridley, widow of captain Charles Vernon Gridley, the commander of the Olympia, the flagship of Adml. Dewey's squadron. This is the first pension granted in the naval service of the war with Spain, the first widow's pension and the first pension to an officer's family. Capt. Gridley lost his life as a direct result of the battle of Manila bay, and, while not classed among the casualties of that victory, really met a hero's death. During the fight Capt. Gridley, even then ill with tropical fever, left his bed and fought during the long hours of the day. His was the battleship that led the procession through the narrow channel, past the guns at Cavite, and opened the fight which wiped the Spanish squadron out of existence.

Queen City Patent Hydraulic Steerer.



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Generates no heat in pilot house.

Has large hand wheel.

Can be changed from power to hand steering instantly.

A favorite with pilots.

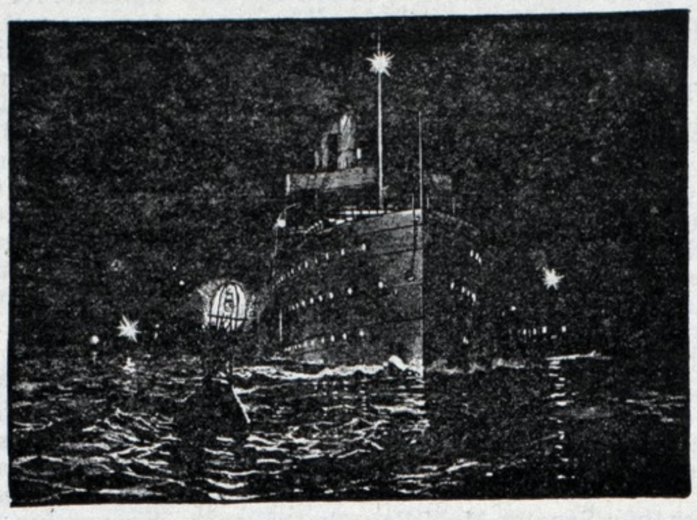
Send for References.

Queen City Engineering Co.

BUFFALO, N. Y.

Pintsch Gas Lighted Buoys.

Adopted by the English, German, French, Russian, Italian, and United States Light-House Departments for channel and harbor lighting. Over 800 gas buoys and gas beacons in service.



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from 80 to 365 days and nights without attention, and can be seen a distance of six miles.

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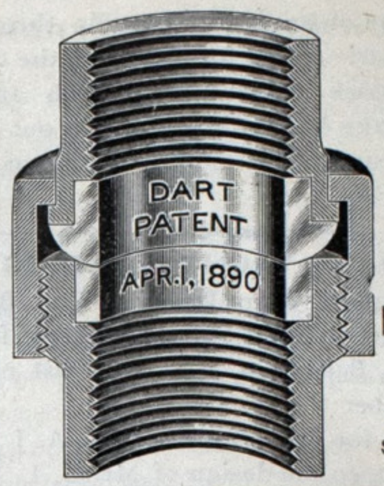

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E. M. Dart Mfg. Co.

Providence R. I.

Send for circulars and prices.

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WANTING COAL

will always find a supply at Geo. N. Carleton's large, new coal dock at East Tawas. The best quality Pennsylvania and Ohio coal supplied night or day. Depth of water at dock, 15 feet.

Almy's Patent Sectional WATER TUBE BOILERS.

NOW USED IN

21 Passenger Boats from 70 to 160 ft. long.
61 Steam Yachts from 50 to 180 ft. long.

U. S. TORPEDO BOAT "STILETTO."

Numerous freight and fishing steamers, launches and stationary boilers are giving most excellent results.

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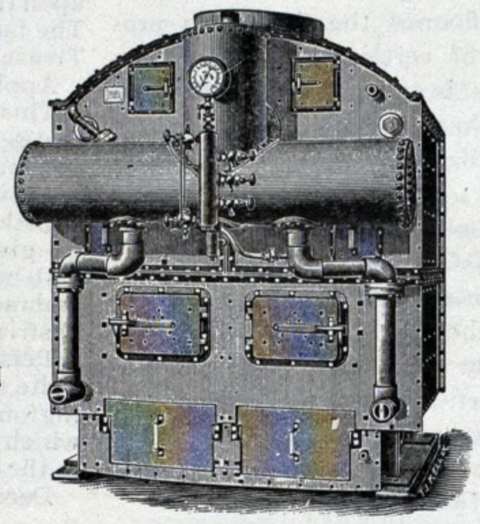

W. A. McGILLIS & CO.

DREDGING.

57 WADE BUILDING. CLEVELAND, OHIO.

AVERAGE LAKE FREIGHT RATES.

In comparing the season of 1897 with the closing season, it is found that the daily average rate on corn to Buffalo from Chicago was 1.388 cents per bushel for both years. On wheat from Duluth to Buffalo the daily average rate was 1.839 cents, or a little less than half a cent over Chicago corn. When the higher rates on coal shipments up the lakes are considered it will be seen that the time has come when Chicago and Duluth are on an equal footing in lake commerce.

The average daily rate on iron ore in 1897 from the head of Lake Superior to Ohio ports was 58.3 cents per ton. This season it was 57.86 cents, a difference of less than half a cent a ton. From Escanaba the average daily rate on iron ore to Ohio ports was 44.26 cents in 1897, and 49.51 in 1898. On hard coal from Buffalo to Chicago the average daily rate was 27.61 cents in 1898 and 27.82 cents in 1897. The great traffic in soft coal from Ohio ports to the head of Lake Superior was done on a daily average of 22.67 cents per ton in 1898.

During the earlier part of the present season carrying charges reached the lowest point in the history of the lake marine. For a considerable period corn was carried from Chicago to Buffalo at ¾c., and even touched ⅝c. In August a boom began which continued to the middle of October, when the highest notch in all important lines of commerce was reached. Corn went to 3½c., iron ore to $1 and coal to 50c. In November freights gradually dropped away again.

A WISE REGULATION.

In view of what is happening in the way of nomenclature of vessels in certain European countries, the action of the United States government in prohibiting the use of more than one word in the name of a ship seems very wise. Experience in this country has shown that commercial operations are facilitated by the use of short words for things which need to be frequently named. In banking amalgamations the cutting short of the name of the new business has been especially noticeable. In telegrams and in office work the names of ships have to be constantly written, and both expense and labor are avoided by brevity.

It might be well if the Germans, who are a practical people, would reconsider their plan of calling their newer mail boats by such very compound names as the North German Lloyd Co. has recently adopted, and revert to the simple and convenient plan of calling their boats after rivers. Surely Spree was a good enough name! No one can think that she will be better named as Kaiserin Maria Theresa. Yet it is announced that such a change is contemplated to bring the enlarged and improved vessel into line—as regards name—with the newer racer Kaiser Friedrick, and Kaiser Wilhelm der Grosse.—The Marine Engineer, London.

IRON ORE SHIPMENTS.

The estimate of the total shipments of ore from the several ports of Lakes Superior and Michigan for the year 1898 is 13,500,000 tons. The amount does not include the shipments during the season to local furnaces, but includes the ore shipped to the furnaces of Ashland, one in Ishpeming and the third at Mayville, Wis.

The ore shipments of 1898 will be 1,000,000 tons more than those of last year over the same districts, though the season of 1897 was looked upon as exceptionally good, and the shipments then greatly exceeded those of any previous season for some years.

These figures do not represent the total output of the mines, but the shipments only. The prices averaged 20 cents per ton higher than those of last year.

THE CHEBOYGAN LUMBER INDUSTRY.

The season of the local saw mills just closed has been the most successful on record. The aggregate cut of the mills foot up 107,000,000 feet and these figures would have been augmented by about 5,000,000 feet if Thompson Smith's Sons' mill had not been destroyed by fire all the latter part of the season.

About one-half the entire cut of the mills was from Canadian stock, or, to be more exact, just 54,000,000 feet of logs were brought over from Georgian Bay. The remainder came down the Cheboygan river and from points in the upper peninsula.

The mills have run night and day nearly all summer, and aside from the loss sustained by Thompson Smith's Sons, they met with no serious loss.

The shingle business this season has been a big factor in the local industries. It is the largest cut in the history of Cheboygan. The prices have held up and those engaged in the business have done a profitable year's work. The entire cut of shingles aggregates 45,600,000.

The lumber remaining on the docks will foot up 32,000,000 M feet, but a portion of this will be shipped by rail during the winter.

In addition 31,500,000 lath were manufactured at the mills.

A FORTUNATE REPLY.

The Duke of Ossuna, who during his long career as Viceroy of Naples was distinguished as much for his sound good sense in small matters as in those larger questions of statesmanship which made him one of the foremost men of Europe, once paid a visit to the Cape galley at Barcelona. As he passed in and out among the crew of slaves he questioned several of them regarding their offences for which they were so laboriously paying the penalties. Each had plenty of excuses. One said he had been sent there from spite; another asserted that the judge who had sentenced him had been bribed; still another declared that his being there was all a mistake, and that he was suffering for the crime of which his brother was guilty.

At last the Duke came to a stout little black fellow of whom he asked:

"And what are you here for, my man?"

"My lord," replied the slave, "I cannot deny that I am justly put in here, for I wanted money, and so took a purse, near Tarragona, to keep me from starving."

Upon hearing this the Duke gave him two or three blows across the shoulders with his stick, saying, as he did so:

"You rogue, what are you doing among so many honest, innocent men? Get you out of their company!"

The thief, who was so surprised that he scarcely comprehended what was going on, was then set at liberty, while the rest were left to labor at the oar.—Harper's Round Table.

SIDE BALLAST TANKS.

There are good accounts from the side ballast tank steamer Mancunia, the first vessel to be fitted with M'Glashan's patent arrangement, in which the placing of a portion of the water-ballast at the sides of the vessel, and extending the tanks up to the weather deck is the feature. The master of the vessel reports that "racing was reduced to a minimum, as it was never necessary to stand by the throttle valve," neither had they experienced "the constant hammering at the fore end." These advantages are due to the vessel having an increased amount of ballast, but the decreased rolling that is reported, is undoubtedly owing to the ballast not being all in the bottom of the vessel. With a heavy beam sea the clinometer showed 26 degrees, whereas in the captain's experience that he had in other vessels in similar circumstances it swung to the extreme limit of the instrument, viz., 45 degrees.

WANTED—A UNITED STATES MERCHANT NAVY.

In the early days of the republic attention was directed to the building of ships to strengthen the commercial enterprise of the country A development of ship building and ship owning followed, that rapidly increased the tonnage of American shipping in foreign trade. When Thomas Jefferson was Secretary of State in the administration of President Washington, he, at the request of Congress, made during the third session of the first Congress, prepared a "report on the privileges and restrictions of the commerce of the United States," which was written after careful study of the question and when his mental powers were in their very prime. His command of the English language was such as to enable him to express himself with precision and felicity, which is a delight to study. In that memorable report he said, in part:

"If particular nations grasp at undue shares of our commerce, and more especially if they seize on the means of the United States to convert them into aliment for their own strength and withdraw them entirely from the support of those to whom they belong, defensive and protective measures become necessary on the part of the nation whose marine resources are thus invaded, or it will be disarmed of its defense; its produ tions will be at the mercy of the nation which has possessed itself exclusively of the means of carrying them, and its policies will be influenced by those who command its commerce. If we lose the seamen and artists whom it now employs, we lose the present means of marine defense, and time will be requisite to raise up others, when disgrace and losses shall bring home to our feelings the disgrace of having abandoned them."

These considerations were of value in Jefferson's day; there are even more so today, when the present commerce of the United States has become of wonderful importance and the future presents a view that is encouraging in the extreme.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—ILLINOIS.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., Dec. 8, 1898.

WAUKEGAN (LITTLE FORT) LIGHT STATION.—Notice is hereby given that, on or about December 31, 1898, the fifth order fixed white light at this station, on the bluff in the city of Waukegan, southerly side of Little Fort river, westerly side of Lake Michigan, will be discontinued.

By order of the Light-House Board:

FRANCIS J. HIGGINSON,
Commodore, U. S. Navy, Chairman.

IRON ORE SHIPMENTS FROM MARQUETTE.

The Marquette iron ore producing district is the oldest in the Lake Superior mining region, the first work having been done in the early fifties. The total output this year will reach 3,125,000 gross tons, which is the largest on record. The biggest year the district enjoyed before the present one was in 1890, during which season 2,993,664 tons were sent to market. The iron ore industry of the Marquette district in its time of mining has sent to market about 52,375,000 gross tons.

In making up the grand total for this year credits are given to the mines as follows:

Cambria, 102,625 gross tons; Champion, 163,200; Cleveland-Cliffs, 865,900; Jackson, 54,570; Lucy, 1,935; Lillie, 209,462; Lake Angeline, 463,040; Lake Superior, 690,000; Negaunee, 191,000; Princeton, 25,250; Queen, 58,000; Republic, 140,000; Richmond 25,000; Winthrop, 122,770; total, 3,086,552.

There will be enough additional ore shipped by all-rail to local furnaces to bring the total up to 3,125,000 tons. All of the mines are making preparations for a big year in 1899.

DREDGE DECISION.

Judge Morrow, of the United States Circuit Court, San Francisco, has just handed down a decision in the case of Alphonso B. Bowers against the San Francisco Bridge Company and Pacific Coast Dredging and Reclamation Company, sustaining the validity of the Bowers patents in hydraulic dredging machines, awarding perpetual injunctions, and ordering an accounting of damages and profits. This decision involves the dredgers used in the Chicago drainage canal, those built by the Bucyrus company and the United States government on the Mississippi river. The decision is broad and sweeping in character, giving to Bowers all that he claims, especially covering all the hydraulic dredges in modern use.

THE output of new tonnage on the Clyde for the ten months of the year aggregate 342,000 tons, and the total for the year it is now known, will prove the record year for tonnage output in the history of the ship building industry on the Clyde. The greater portion of the construction has been screw steamers for the mercantile marine.

TOBIN BRONZE

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Tensile strength of plates one-quarter inch thick, upward of 78,000 lbs. per square inch. Torsional strength equal to the best machinery steel. Non-corrosive in sea water. Can be forged at cherry red heat. Round, Square and Hexagon Bars for Bolt Forgings, Pump Piston Rods, Yacht Shaftings, etc. Rolled Sheets and Plates for Pump Linings and Condenser Tube Sheets, Centerboards, Fin Keels and Rudders.

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SOLE MANUFACTURERS,

Send for Pamphlet. 19-21 Cliff St., NEW YORK.

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CAPITAL, Paid up in Cash, - - - - $3,000,000.00
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GREVILLE E. FRYER, Sec'y and Treas. JOHN H ATWOOD, Assistant Secretary.
T. HOUARD WRIGHT, Marine Secretary.

Lake Marine Department, GEORGE L. McCURDY. MANAGER. CHICAGO, ILL.

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Insures against Marine and Inland Transportation Risks and issues policies making Loss Payable in England.

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The profits of the Company revert to the assured, and are divided annually upon the premiums terminated during the year; thereby reducing the cost of insurance. For such dividends, certificates are issued bearing interest until ordered to be redeemed, in accordance with the charter.

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For Stationary, Portable, Traction Engines, Tugboats, &c.
Thoroughly Reliable—Perfectly Automatic.
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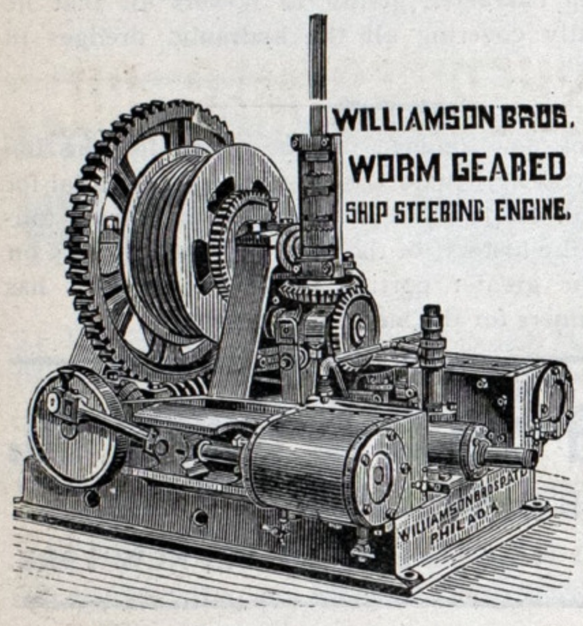

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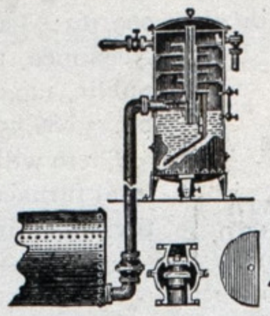
With either Fractional, Spur or Worm Gear of Various Patterns to Suit all Purposes.



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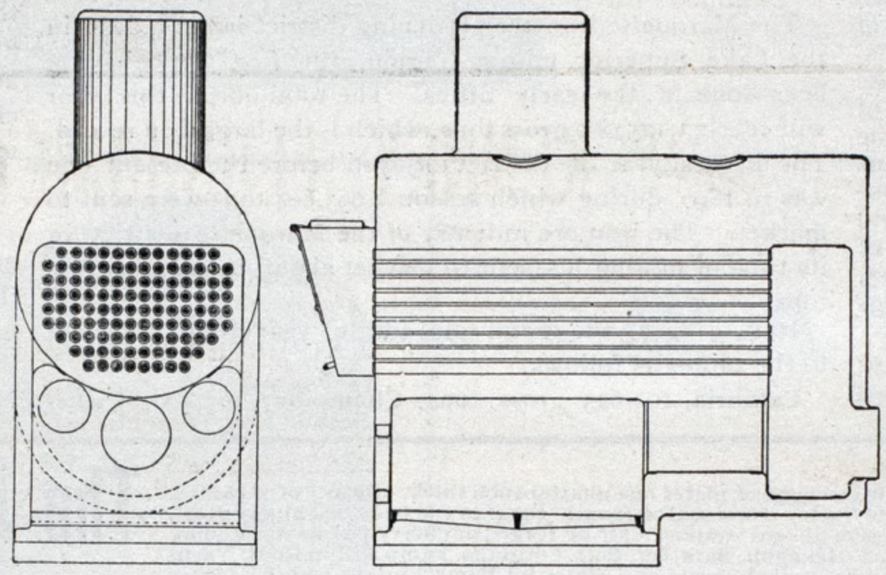

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They are economical and occupy but little space.
They give perfect satisfaction.
They are easily kept clean, and the crown sheet being cylindrical in form requires no bracing.

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Our knowledge of river navigation is earned through long experience and exceptional opportunity. We design and build the *entire and complete* outfits of driving machinery for powerful light draft vessels, having the best of modern shop facilities to aid us in doing *all* the work. Write to us before you act.

MARINE IRON WORKS
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COMPASS ADJUSTERS,
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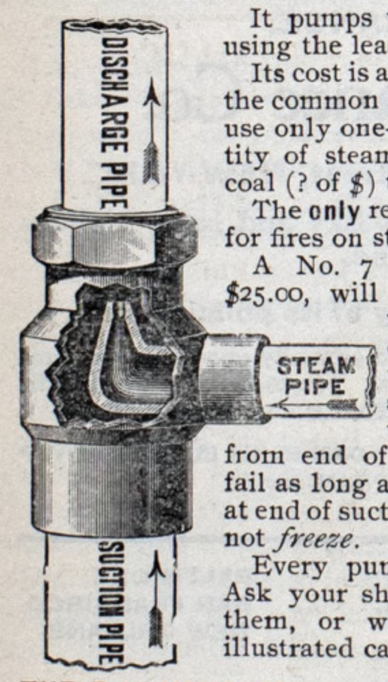
Use the Vanduzen Steam Jet... PUMP
THE BEST STEAM JET PUMP IN THE WORLD.



It pumps the most water using the least steam.

Its cost is a little more than the common syphon, but will use only one-third the quantity of steam; and it takes coal (? of $) to make steam.

The **only** reliable Jet Pump for fires on steam vessels.

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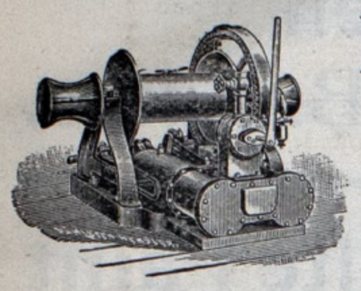

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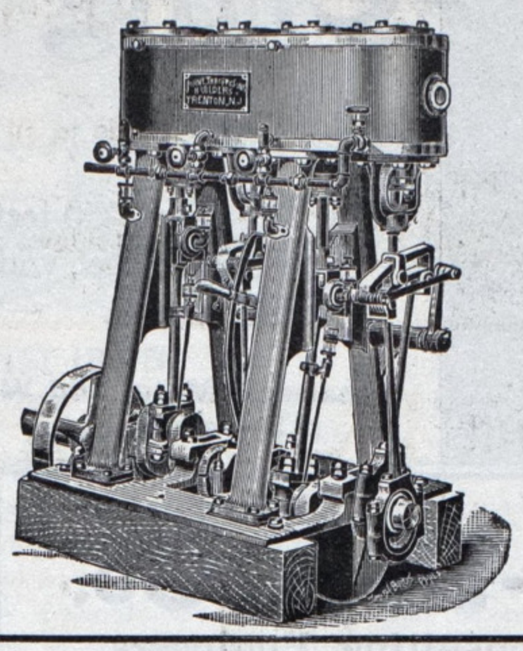

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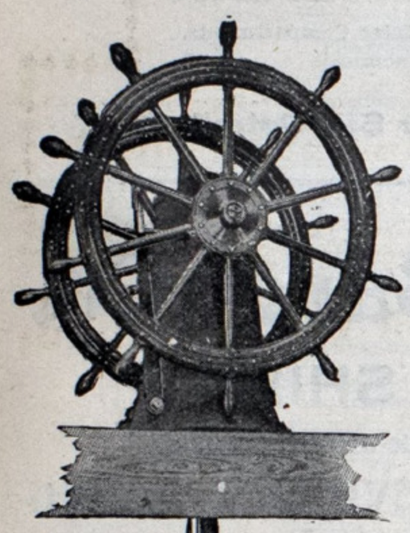

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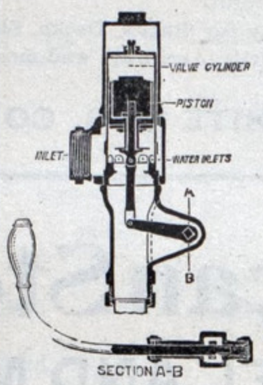

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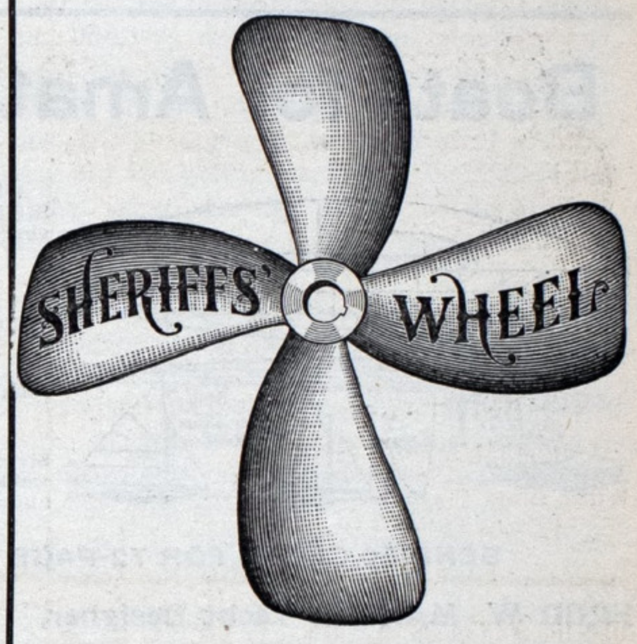

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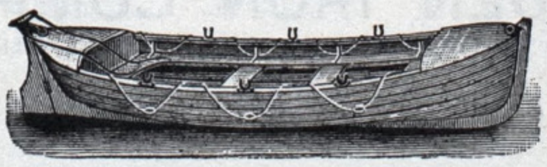

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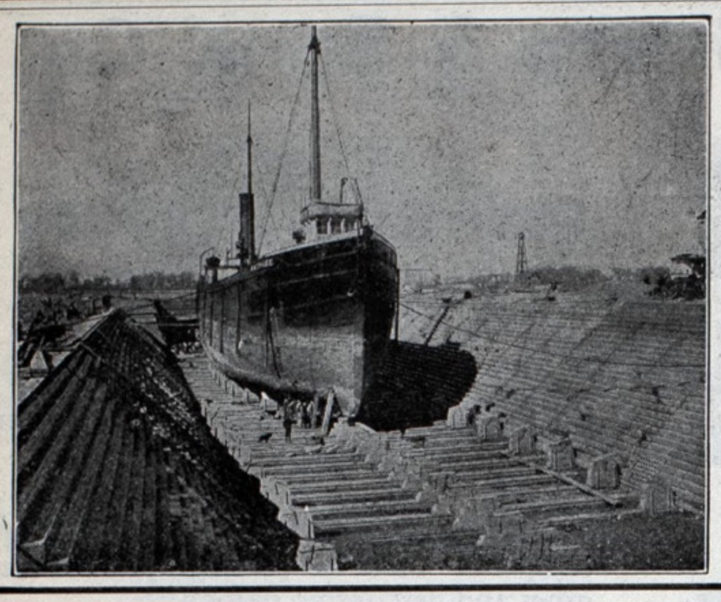

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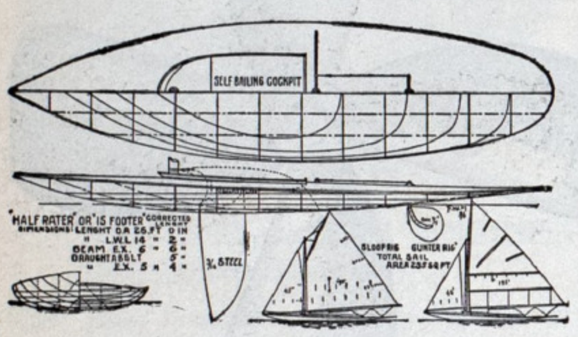

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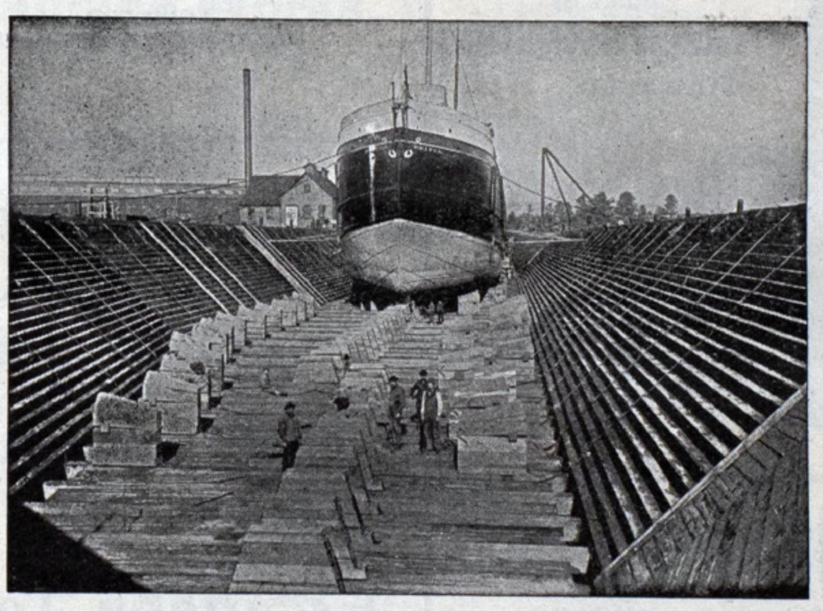

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